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Big Sky CLEARWATER

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The QUESTION is: What does SAFETY look like in your WORKPLACE?

CONFINED SPACE ENTRY PROCEDURES

LOCKOUT/TAGOUT POLICY

CONSTRUCTION SITE SAFE PRACTICES
TRENCHING & SHORING
CALL BEFORE YOU DIG

PLEASE RETURN

HAZARD COMMUNICATION PROGRAM
MSDS LABELS TRAINING

ACCIDENT INVESTIGATION
WORKSITE INSPECTION
HAZARD CORRECTION

OPERATOR RESPONSIBILITY
RISK MANAGEMENT PLANS

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This publication welcomes articles of interest and random pieces of information on water and wastewater treatment. If you have ideas or information you would like to share with other people involved in the water or wastewater field, please contact the Department of Environmental Quality.

An article may consist of your thoughts and ideas about something you may have experienced or such information that could help someone else in their day-to-day work. It could also be a technical article developed from research information and library resource material. If it has to do with these topics and you think it may be of interest, please send it to us (Attention: Clearwater Editor), or give Bill Bahr or Rick Cottingham a call at 444-4454.

If you do not wish to continue receiving this plublication, please send us your mailing label so we may remove it from our mailing list. Thanks!

Cover:

The cover includes a short list of safety programs and policies that are in place in most water and wastewater treatment systems throughout Montana. In this issue, DEQ presents discussion of some of these topics and hopes to encourage operators, managers and owners to address safety effectively for all workers all of the time.

Editor: Bill Bahr

The *Big Sky Clearwater* is for water and wastewater operators across Montana. It is published twice a year by the Permitting & Compliance and Planning, Prevention & Assistance Divisions of the Montana Department of Environmental Quality in cooperation with the Montana Section of the American Water Works Association and the Montana Water Environment Association.

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Last date to receive contributions is 30 days before publication.

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Reflections in the Ripples

Throughout Montana citizens are provided safe drinking water by dedicated operators, managers and system owners, from small systems to large cities. The wastewater generated by Montana citizens is treated to reduce pollutants to safe levels prior to discharge to state surface and ground waters by treatment systems operated and managed by water quality professionals and system owners. There are a variety of programs in place to assure citizens in the state that the water we use is safe and does not harm our state environment when we return it to Montana's natural waterways. Water is a precious resource that is necessary for public health and the enjoyment of the quality of life we expect as citizens of this marvelous state.

Agencies at work in Montana include the Environmental Protection Agency (EPA), the Department of Environmental Quality (DEQ), the Department of Natural Resources (DNRC), the Department of Commerce (DOC) and the Department of Public Health and Human Services (DPHHS), with direct influences on many water quality issues. Other agencies are involved in indirect ways to help protect the environment of Montana, and to list them all would be an undertaking far larger than this brief commentary intends. Suffice it to say, that along with the above agencies that have directed specific legal charges, there are a vast assortment of groups that are working actively to assist the overall effort to protect public health and protect the environment.

This issue of the CLEARWATER includes discussion not only of drinking water and wastewater treatment systems, but also includes a variety of articles related to safety within these treatment facilities. It is not a far stretch to understand that if the workers in treatment plants are injured or killed by unsafe conditions, the treatment plants will also not be operated to levels required to provide the service we expect from them. As you read through this issue, please keep in mind those workplaces you go to each day. Try to imagine the safest work conditions possible and work to bring about conditions in those workplaces that allow workers to carry out the important duties of treating water to levels both needed for our safe health and for our protected environment.

Thank you, and please work safely. I want to visit with each and every one of you as I travel about Montana on my appointed rounds. Bill Bahr.

SAFETY AND HEALTH PROGRAMMING FOR WATER AND WASTEWATER UTILITIES

"Safety - a condition of being safe; freedom from danger or hazard, or the quality of being devoid of whatever exposes one to danger or harm."

Why should we care about safety and health at a water/wastewater utility?

☑ PHILOSOPHICAL STANDPOINT:

All persons should have the right to engage in employment with an employer, to perform his/her expected work activities, and to return from the job in a safe and healthful condition.

☑ LEGAL STANDPOINT:

Private Employers Nationwide:(Williams-Stieger Act, OSH act of 1970)

'(Every employee has the legal right to) employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm'.

Public Employees In Montana: (Montana Safety Act - MCA-50-71)

Section 201 "Each employer shall:

(1) furnish a place of employment that is safe for each of his employees;

(2) with the exception of footwear, purchase, furnish, and require the use of health and safety devices, safeguards, protective safety clothing, or other health and safety items, including but not limited to air masks, hardhats, and protective gloves, that may be required by state or federal law, the employer, or the terms of an employment contract, unless the terms of a collective bargaining agreement provide otherwise;

(3) adopt and use practices, means, methods, operations, and processes that are reasonably adequate to render the place of employment safe; and

(4) do any other thing reasonably necessary to protect the life, health, and safety of his employees."

ECONOMIC STANDPOINT:

⇒ Occupational injury or illness involves a person being hurt and associated loss.

⇒ Occupational injury or illness may involve direct medical and compensation losses or costs.

⇒ Occupational injury or illness results in indirect losses of as much as ten times the direct losses.
⇒ Occupational injury or illness results in insurance losses which cause rates to increase.
⇒ Occupational injury or illness may result in publicity and loss of goodwill and customer confidence.

SOME STATISTICAL FACTS:

- Workplace deaths in U.S. in 1996 = 6,112.
- Workplace disabling injuries in 1996 = 3,200,000.
- There is one work related death every 86 minutes.
- There is one work related disabling injury every 5 1/2 seconds.

- Transportation and Public Utilities Lost Work Day Incident Rate = **8.7** in 1996
- Electric, Gas, and Sanitary Services Lost Work Day Incident Rate = **6.9** in 1996

This represents a rate of injury to workers of (8.7) & (6.9) in 100 or almost (9 %) & (7%) of the workforce experiencing an injury that resulted in either lost worktime, medical treatment other than first aid, loss of consciousness, restriction of work or motion, or transfer to another job.

These statistics represent people! People just like you! People in the same kinds of industries that you work in!

Types of Safety:

The three general areas of safety that are of concern to every utility operation include;

organizational safety-prevention of injury to employees both on and off the job;

fleet safety-prevention of automobile or equipment accidents; and

public safety-prevention of injury to the general public.

There is a close relationship and considerable overlap among these three areas of safety. It is not possible to emphasize occupational safety without concern for public safety, and the same is true for public and fleet safety. Each of these areas is equally important in the efficient operation of a water or wastewater utility.

A Suggestion:

☛ If your employer doesn't have a Safety & Health Program, he establish and implement one today!

☛ If he has a Safety & Health Program in place, he do everything possible and practical to ensure that it is an effective program!

WHAT IS AN EFFECTIVE SAFETY AND HEALTH PROGRAM?

BASIC PROGRAM ELEMENTS:

☛ Management Leadership

☛ Employee Involvement

☛ Workplace Analysis

☛ Hazard Prevention and Control

☛ Safety and Health Training

Management Leadership (commitment and participation)

☑ Clear worksite safety and health policy (People know, support, and can explain the policy).

☑ Clear Goals and objectives are set and communicated (People know and accept the goals, the desired results, and the way in which the objectives will be met).

☑ Management Leads (People can see management's active commitment to safety and health).

☑ Management Example (People observe management following the rules and addressing safety issues).

Employee Involvement

☑ Employees take an active part in the program (The employees have active roles and a sense of ownership).

☑ Employees have been assigned safety responsibility (Employees know what safety performance is expected of them).

☑ Employees have authority to make safe decisions and are given resources necessary to do so.

☑ Employees are held accountable for their safety performance (Proper performance is observed appropriately rewarded or disciplined).

☑ The safety and health program is periodically reviewed and modified as needed on an ongoing basis.

Workplace analysis

☑ A periodic hazard survey is conducted and reported by an expert. Such a survey is used to identify hazards and track correction.

☑ Hazard review and change analysis is conducted proactively during the planning stage of all new projects, projects, processes, facilities, and purchase of equipment and materials. (Such analysis includes input and participation by the employees affected.

☑ Routine hazard analysis of activities is conducted on various jobs and processes which includes employee input and understanding.

☑ Self inspection of facilities, activities, and processes are routinely conducted which include active participation by employees or their representatives. (The findings of such self inspection must be corrected and recurrence should be rare).

☑ There is a system for the reporting and correction of hazards as they are found. (Employees must be comfortable in reporting hazards and confident that they will be effectively addressed).

☑ Accidents and “Near Misses” are reported and promptly investigated for causes with the objective being to prevent recurrence.

☑ Accident and illness data is collected, maintained, analyzed, and disclosed to heighten employee awareness and to assist in prevention efforts.

Hazard Prevention and Control

☑ Where hazards have been detected, if the cannot be eliminated, they are disclosed to employees and appropriately controlled using suitable engineering methods or enforced safe work practices.

☑ There is a schedule of routine maintenance of facilities and equipment that is diligently carried out. (Employees are able to recognize maintenance needs and are authorized to order or perform maintenance as it is needed).

☑ There is an emergency plan and employees are trained and know immediately how to respond to emergencies.

☑ All facilities are fully equipped for emergencies with systems and equipment in place and regularly tested.

☑ Occupational health professionals visit regularly to assist in hazard identification and training.

☑ Personnel with appropriate training and skills are on site or located in close proximity to allow quick response in a medical emergency.

Safety and Health Training

☑ Employees are trained to recognize, and control or eliminate the hazards associated with their work place and work activities (Refresher training is provided to ensure an ongoing level of proficiency).

☑ Supervisory personnel are trained, understand, and carry out their responsibilities relating to hazard analysis, detection, and correction; training reinforcement; discipline and rewards; communication of procedures; and training reinforcement.

☑ Management personnel have received formal safety and health training and understand and carry out their responsibilities in their roles as managers.

COMMON GENERAL AREAS OF SAFETY CONCERNS FOR WATER AND WASTEWATER:

⇒ Chlorine
⇒ Electrical Safety
⇒ Hearing Protection
⇒ Asbestos
⇒ Vehicle Safety
⇒ HAZWOPER
⇒ Confined Spaces
⇒ Trenching
⇒ Protective Equipment
⇒ Lockout/Tagout
⇒ Compressed Gases
⇒ Fire Safety
⇒ Hazard Communication

Suggestions Regarding General Safety Practices and Equipment for Water & Wastewater Operations

Most jobs can be done safely in more than one way, depending on the competence, experience, and alertness of the workers.

Undefined work procedures result in confusion and the likelihood of injuries.

Safe work procedures should be established and standardized for all jobs. Standardization of safe work procedures along with adequate training are basic requirements for safety.

Before beginning a job you should carefully consider the job from the viewpoint of performing it safely and efficiently.

You should only perform those jobs for which you have received instructions and are qualified to perform.

You should be aware of unsafe circumstances or unusual conditions such as unsafe equipment, unusual noises in equipment, potential for fire, potential for exposure to chemicals and harmful vapors, and other dangers. Read and obey signs and warnings. Learn to think safety!

Personal Protective Equipment

A primary component of an organization's safety and health program is furnishing of personal Protective equipment and enforcing it's use.

Types of personal protective equipment (PPE):

- Face and Eye Protection
- Foot Protection
- Hand Protection
- Body Protection
- Head Protection
- Safety Belts
- Respiratory Equipment
- First Aid Equipment

General Safety Procedures:

- Lifting, Lowering, Carrying, Pushing and Pulling.
- Fall Prevention
- Running and Walking
- Structural Safety
    a. Stairways
    b. Walkways
    c. Handrails

Small Tools and Equipment:

Hand tools
    Axes and Hatchets
    Chisels and Punches
    Files
    Hammers
    Picks
    Saws
    Screwdrivers
    Shovels and Spades
    Wrenches

Portable Power Tools
    Portable Electric Hand Tools
    Pneumatic and Hydraulic Tools
    Metalizing and Sandblasting
    Grinding Wheels
    Soldering Irons

Gas and Arc Welders
    Oxygen
    Acetylene
    Electrical Power Supply Circuits
    Personal Protective Equipment

General Equipment
    Wheelbarrows
    Hand Trucks
    Scaffolds
    Ladders
    Machine Guards

Large Tools and Equipment:

- Power Loaders, Shovels and Backhoes
- Concrete Mixers
- Air Hoists
- Mobile Cranes
- Overhead Cranes and Hoists

Vehicle Operation and Maintenance:

- Development and practice of Defensive Driving Skills
- Observation of Traffic Regulations
- Use of Unsafe Vehicles
- Vehicle Daily Safety Check

Motor Vehicle Service:

- Proper Fuels, Flammable Liquids and Lubricant Storage
- Proper Guarding of Moving Parts
- Direction of Exhaust to the Outside During Service Activities
- Proper Blocking or securing of Suspended and Jacked Equipment
- Secure Placement and Footing of Jacks
- Proper Refueling Procedures
- Oil and Grease Spills
- Operation of Steam and Wash Equipment
- Appropriate Tire Repair Precautions

Construction Activities:

- Confined Spaces (Program)
- Excavations and Trenching (Program & protection Systems)
- Traffic Control (Plans and Equipment)

Material Handling:

- Pipe (Types & Handling)
- Valves
- Meters
- Hydrants
- Couplers

Supply and Storage Facilities:

- Wells and Wellhouses (Security)
- Pumping Stations (Security)

- Electrical Facilities and fixtures
- Elevated Tanks (Access & Security)
- Reservoirs and Lakes (Access & Security)

Building and Facilities Maintenance:

- Cleaning
- Painting
- Landscape Maintenance

Storage and Stock Maintenance:

- Housekeeping
- Material Handling Practices
- Material Handling Equipment

Hazard Communication:

- Written Program
- Material Safety Data Sheets (MSDS)
- Labeling
- Training

Chemical Storage and Handling:

- Activated Carbon
- Alum and Ferrous Sulfate
- Anhydrous Ammonia
- Ammonium Sulfate
- Carbon Dioxide
- Chlorine
- Hypochlorites
- Fluorides
- Lime
- Ozone
- Potassium Permanganate
- Soda Ash (Sodium Carbonate)
- Sodium Chlorite

Chemical Laboratories:

- General Laboratory Precautions (CHP)
- Equipment and Apparatus Precautions
- Chemical Reagents

Compressed Gases

Fire Protection and Emergency Preparedness:

Extinguishers
Suppression Systems
Plan & Procedures

Office Safety:

Housekeeping
Slips, Trips and Falls
VDT use
Ergonomics and Repetitive Stress
Electrical Safety
Fire Safety

IMPORTANT SAFETY PROGRAM INFORMATION

The Montana Department of Labor & Industry has a Safety Bureau that will provide safety program review and safety evaluations for all municipal systems. The highly motivated and trained professional staff in this program include safety inspectors and industrial hygienists. Contact the Safety Bureau at 406-444-6401 for assistance in developing and managing the safety program at your facility.

65th ANNUAL

WATER SCHOOL

For Water and Wastewater Operators and Managers

SEPT. 21-24, 1998
Strand Union Building
Montana State University - Bozeman

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Conducted by
Montana Department of
Environmental Quality

Montana Environmental Training Center

Montana State University - Bozeman
Montana University System Water Center
Civil Engineering Department

REGISTRATION

Registration begins at 7:30 a.m., Monday, September 21 in the Strand Union Building (SUB), outside Ballroom B.

No refunds will be issued after the school begins. A refund of registration minus $25.00 administration cost will be provided prior to the beginning of the program.

PARKING REGULATIONS

All conference participants are now required to have a permit to park on campus. All water school participants who preregister will receive a confirmation letter prior to the conference with a hanging parking permit enclosed and a map showing you where to park. To avoid being ticketed display the sticker and park in the designated area. Visitor cars without tags are subject to being towed. Any lost tags will have to be replaced by the participant for a $3.00 fee.

MOTEL ACCOMMODATIONS

Rooms have been reserved for Water School participants at:

Days Inn
1321 North 7th Ave. - (406) 587-5251
Grantree Inn
1325 North 7th Ave. - 800-624-5865
City Center Motor Inn
507 West Main - 800-528-1234
Bozeman Comfort Inn
1370 North 7th Ave. - 800-587-3833

Please identify yourself as a participant of Water School and make your reservation before September 1st. If you would like a complete Bozeman Accommodation guide contact Extended Studies at (406) 994-6683.

THE WATER SCHOOL

The 65th Annual Fall Water School will be held in Bozeman on September 21-24, 1998 at Montana State University - Bozeman.

Two to four tracks will be run concurrently for water and wastewater system operators. It will be the individual operator's choice to select classes that relate to his or her professional or system needs. Some courses will be offered in joint session as they are applicable to all systems.

Water and wastewater examinations will be administered separately by the DEQ Certification Office on Friday, September 25, 1998.

Attendance at the Water School can be used toward satisfying continuing education credits (CECs) required of operators to maintain certification.

★ ★ ★ ★ ★ ★ ★ ★ ★

SPECIAL SESSION
Wednesday, September 23rd
"Groundwater Disinfection
&
D/DBP Rule"
featuring guest speaker:
Fred Pontius, AWWA,
Regulation Specialist

Designed for consulting engineers, public works directors, and water superintendents. Participants may attend this one day session for $50.00. Please note that the fee is included in the registration price for participants attending the entire week.

TOPICS FOR THIS YEAR INCLUDE:

- Surface Water Treatment:
  - Filter Evaluation
  - Filter Bed Inspection
- Distribution
  - O & M
  - Meters and Repair
  - Trenching and Shoring
- Wastewater and Surface Permits
- Chlorination:
  - Use
  - Repair and Safety
- Collection System Maintenance
- Microbiology of Wastewater
- Biofilms
- Groundwater Systems of Montana
  - Emergency Planning
  - Groundwater Basics
  - Watershed Management
  - Source Water Protection
- Advanced Wastewater Treatment
- State Revolving Fund Update
- Computer Spreadsheets
- Lagoon Operations
- Wastewater Lab
- Polymers and Flocculants
- Jar Testing
- D/DBP Rule
  - Rule Itself
  - What Effects and How To Deal With It
  - IESWTR
  - Groundwater Rule
  - THM's/HAA's
  - Enhanced Coagulation

INFORMATION ON CERTIFICATION AND THE CERTIFICATION EXAM

Following the Water School, the Montana DEQ Operator Certification Office will also be administering certification examinations on Friday, September 25, 1998 from 8:30 TO 12:30. This examination will be for all certification classes of water and wastewater operators. Registration for the School and the exam are SEPARATE. Registration for the School does NOT automatically register you for the exam. Attendance at Water School is not required to take the exam; however, the exams should be much easier after four days of intense study in the Basic Track sessions at the school.

To be eligible to take examinations, you MUST submit the following by September 10, 1998 (NO EXCEPTIONS) to the DEQ Operator Certification Office in Helena:

- examination notice
- application for certification as a water/wastewater operator
- appropriate fees
  $30.00 application fee
  $20.00 for each exam taken

This is separate from, and should not be confused with, the registration for the Water School. To receive an application, or for more information on certification, CEC's, or the exam, contact:

Shirley Quick
DEQ
P.O. Box 200901
Helena, MT 59620-0901
ph: (406)444-2691 or (406) 444-3434

BASIC TRACK TRAINING FOR NEW OPERATORS

The basic track is designed for entry level operators who plan on taking the certification exam either at the end of the school or in the near future. Classes offered will include:

- scientific terms
- mathematics
- lagoons
- groundwater systems
- water chemistry
- mechanical systems for basic wastewater
- overview of water treatment processes

Entry level operators who have not yet taken the exam are not required to obtain continuing education credits (CEC's), so no CEC's are offered for the basic track sessions. These sessions are designed as a supplement to individual study and should be of significant value to those planning to take the exam.

Interactive Source Water Protection Training

Learn the basics of source water protection and how to develop a protection plan for your community.

This computer-based training is enhanced with the use of multimedia and interactive exercises. An instructor will lead you through this process on computers.

Sessions will be offered in the morning and afternoon. Preregistration is advised to ensure computer availability.

For more information, contact Kevin Kundert at (406) 994-5994 or *kkundert@montana.edu*

THE 65th ANNUAL WATER SCHOOL
FOR WATER & WASTEWATER OPERATORS & MANAGERS
TENTATIVE PROGRAM

MONDAY, SEPTEMBER 21, 1998

TIME	***JOINT MORNING SESSIONS***
7:30 AM	*Registration*
8:30 AM	*Welcome to the 65th Annual Fall School* *Introductions*
8:45 AM	*Water School Agenda*
9:00 AM	*New Directions at DEQ*
9:15 AM	*Operator Certification and Contract Operators*
9:45 AM	*Operator Responsibilities*
10:15 AM	*Break*
10:30 AM	*The Public Health Link*
11:30 AM	*Lunch*

CONCURRENT AFTERNOON SESSIONS: MONDAY, SEPTEMBER 21, 1998

TIME	***BASIC TRACK***	***LARGE & SMALL WATER SYSTEMS***	***WASTEWATER SYSTEMS***
1:00 PM	*Operator Certification [all exams]*	*Coliforms* *Organic Monitoring* *Consumer Confidence Reports*	*Wastewater Treatment in Montana*
1:30 PM	*BASIC*		
3:00 PM	*Water School Vendor Show*		

CONCURRENT MORNING SESSIONS: TUESDAY, SEPTEMBER 22, 1998

TIME	*BASIC TRACK*	*LARGE & SMALL WATER SYSTEMS*	*DISTRIBUTION*	*WASTEWATER SYSTEMS*
8:00 AM	*BASIC*	*Source Water Protection*	*Meters*	*Wastewater Microbiology*
9:00 AM	*BASIC*			
10:00 AM	*Break*			
10:15 AM	*BASIC*	*Watershed Management*	*Valves*	*TMDLs, Nutrients and other issues facing WWTPs*
11:00 AM		*Emergency Planning*		
12:00 PM	*Lunch*			

CONCURRENT AFTERNOON SESSIONS: TUESDAY, SEPTEMBER 22, 1998

TIME	*BASIC TRACK*	*LARGE WATER SYSTEMS*	*SMALL WATER SYSTEMS*	*DISTRIBUTION*	*LARGE WASTEWATER SYSTEMS*
1:00 PM	*SMALL WASTEWATER SYSTEMS and BASIC* *Lagoon Design & Operations*	*Filter Evaluation & Core Sampling*	*Groundwater Systems of MT*	*Chlorine and Its Use*	*Activated Sludge Operations*
2:00 PM		*Filterbed Inspection*	*Local GW Assessments*		
3:00 PM	*Break*				
3:15 PM	*BASIC*	*Bozeman Water Treatment Plant Tour*	*Virus Transport*	*Chlorine System Repair*	*Joint Wastewater Sessions: Microscopes & Meters Help Optimize Plant Operations*
4:00 PM	*BASIC*				
5:00 PM	*Adjourn*				

CONCURRENT MORNING SESSIONS: WEDNESDAY, SEPTEMBER 23, 1998

TIME	*BASIC TRACK*	*LARGE & SMALL WATER SYSTEMS*	*DISTRIBUTION*	*WASTEWATER SYSTEMS*
8:00 AM	*BASIC*	*Groundwater Rule & CTs*	*Distribution O&M*	*TMDLs for Montana*
9:00 AM	*BASIC*			*Impaired Stream Reaches*
9:30 AM	*BASIC*	*D/DBP Rule - The Rule Itself*		
10:00 AM	*Break*			
10:15 AM	*BASIC*	*D/DBP Rule - What effect and How to deal with it*	*Distribution O&M*	*Permits*
11:15 AM	*BASIC*			*Enforcement*
12:00 PM	*Lunch*			

CONCURRENT AFTERNOON SESSIONS: WEDNESDAY, SEPTEMBER 23, 1998

TIME	*BASIC TRACK*	*LARGE & SMALL WATER SYSTEMS*	*DISTRIBUTION*	*WASTEWATER SYSTEMS*
1:00 PM	*BASIC*	*D/DBP Rule - THM's Enhanced Coagulation*	*Trenching & Shoring*	*Impacts on Water Resources in the Greater Yellowstone Ecosystem*
2:00 PM	*BASIC*			
3:00 PM	*Break*			
3:15 PM	*BASIC*	*Filter Membrane Technology*	*Confined Spaces*	*Bozeman Wastewater Treatment Facility Tour (At WWTP)*
4:00 PM				
5:00 PM	*Adjourn*			

JOINT MORNING SESSIONS: THURSDAY, SEPTEMBER 24, 1998		
TIME	BALLROOMS B, C and D	
8:00 AM 0.1 cec	Facility Planning: Evaluating System Needs and Capabilities	
9:00 AM 0.1 cec	State Revolving Fund Programs Serving Drinking Water Systems and Water Pollution Control Facilities	
10:00 AM	Break	
10:15 AM 0.125 cec	Getting Your Project Off the Drawing Board: A View from the Community	
11:30 AM	Wrap-up: School Evaluations/Closing Comments by School Director/Adjourn 0.025 cec	
1:15 PM 4:30 PM	General Water Treatment/Distribution Review (Room 275) [1A, 2A, 3A, 4A; 1B, 2B, 3B; 2A3B, 3A4B, 4AB, 5AB] NO CEC's - For Certification Exam Preparation Only	General Wastewater Treatment Review (Room 276) [1C, 2C, 3C, 4C] NO CEC's - For Certification Exam Preparation Only

WATER SCHOOL REGISTRATION FORM

September 21-24, 1998

Name______________________________

Address ____________________________

City, State, Zip ______________________

Daytime Phone ______________________

Preregistration: - $90.00
On-Site Registration: - $105.00
Special Session Wednesday - Sept. 23 - $50.00

Total amount enclosed: ______________

Checks and PO's should be payable to MSU-Bozeman

Method of payment:

☐Check (payable to MSU)

☐Credit Card(Visa, MC, Dis) Exp. Date ____

Card # ___________________________

☐Send bill to institution

PO # _____________________________

Address ___________________________

____

Interactive Training Workshop Preregistration

Limited Enrollment - See inside for details

☐ morning session ☐ afternoon session

Complete and return with your payment to:

Extended Studies
P.O. Box 172200
Bozeman MT 59717-2200
(406)994-6683

DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING AND COMPLIANCE DIVISION

MARC RACICOT, GOVERNOR
METCALF BUILDING
1520 EAST SIXTH AVENUE

STATE OF MONTANA

(406)444-2691
FAX (406)444-1374
PO BOX 200901
HELENA, MONTANA 59620-0901

EXAMINATION NOTICE

FRIDAY -- SEPTEMBER 25, 1998 -- 8:30 A.M. TO 12:30 P.M.

Examinations have been scheduled on the above date for certification as operators for **Water Distribution Systems, Water Treatment Plants, Well Water Supply Systems, Wastewater Treatment Plants, and Wastewater Lagoons** at the following location:

STRAND STUDENT UNION BUILDING
MONTANA STATE UNIVERSITY - BOZEMAN

Please contact the certification office for information on the Math Review that will be free for all pre-registered examinees in Bozeman on Thursday afternoon, September 24, 1998. The Water School being held on the MSU campus September 23-26 will include a basic track for entry level operators. **Attendance at the Water School is not mandatory, but is recommended.** To request a brochure on the Water School call MSU at 406/994-4930. Fees for the school are payable to MSU with pre-registration.

BY SEPTEMBER 10, 1998, EVERYONE TAKING THESE EXAMINATIONS MUST HAVE:

- **Completed and returned an application for certification as a water/wastewater operator.**
- **Paid the annual application fees for fiscal year 99 which runs from July 1, 1998 to June 30, 1999.**
- **Submitted an examination registration slip and fee of $20 per examination. (Combination examinations 2A3B, 3A4B, 4AB and 5AB require $20 examination fee only.)**

APPLICATION FEES ARE: $30 fee for any water type and classification of exam; and/or $30 fee for any wastewater type and classification.

TO REGISTER FOR THIS EXAM: Detach and mail the registration slip below to the following Helena address. For additional information, call Tom Sanburg at the Helena operator certification office at 406/444-3434 or write:

WATER/WASTEWATER OPERATOR CERTIFICATION
Department of Environmental Quality - PO Box 200901 - Helena 59620-0901

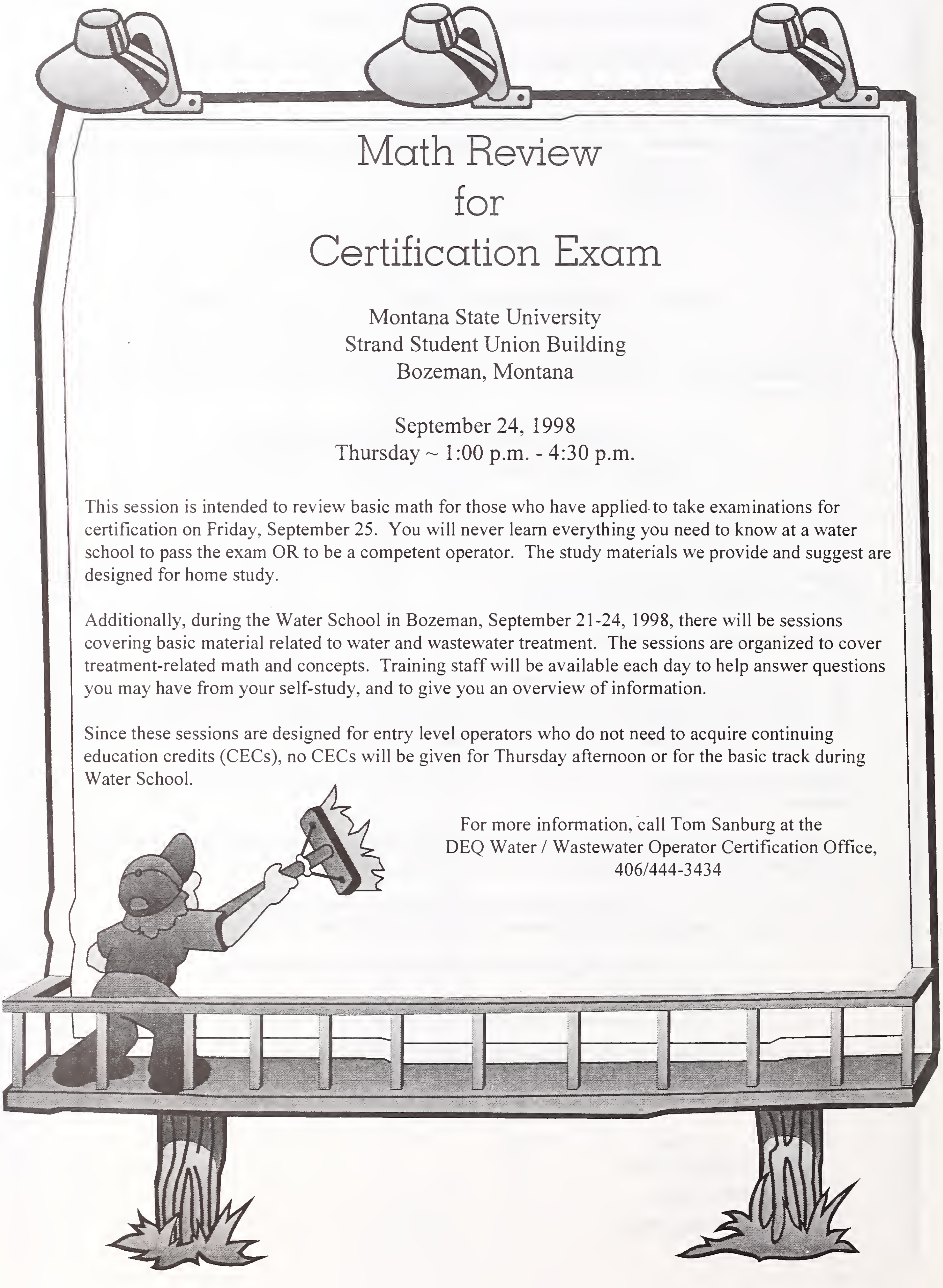
PLEASE KEEP THE UPPER PORTION OF THIS NOTICE

EXAMINATION REGISTRATION SLIP

(Mark which exam you will be taking, detach and return with the appropriate fees by September 10, 1998)
[Objects of revenue: exam 5002, water app (A&B) 5005, wastewater app (C) 5006]

Type	Class	1	2	3	4	5
Water Distribution	A	____	____	____	____	____
Water Plant	B	____	____	____	____	____
Wastewater Plant	C	____	____	____	____	

"AN EQUAL OPPORTUNITY EMPLOYER"



Math Review
for
Certification Exam

Montana State University
Strand Student Union Building
Bozeman, Montana

September 24, 1998
Thursday ~ 1:00 p.m. - 4:30 p.m.

This session is intended to review basic math for those who have applied to take examinations for certification on Friday, September 25. You will never learn everything you need to know at a water school to pass the exam OR to be a competent operator. The study materials we provide and suggest are designed for home study.

Additionally, during the Water School in Bozeman, September 21-24, 1998, there will be sessions covering basic material related to water and wastewater treatment. The sessions are organized to cover treatment-related math and concepts. Training staff will be available each day to help answer questions you may have from your self-study, and to give you an overview of information.

Since these sessions are designed for entry level operators who do not need to acquire continuing education credits (CECs), no CECs will be given for Thursday afternoon or for the basic track during Water School.

For more information, call Tom Sanburg at the
DEQ Water / Wastewater Operator Certification Office,
406/444-3434

DRINKING WATER STATE REVOLVING FUND LOAN PROGRAM APPROVED

In June the Montana Department of Environmental Quality (DEQ) received final approval from the United States Environmental Protection Agency (EPA) for a grant to make low interest loans to public water systems. This program, the Drinking Water State Revolving Fund (DWSRF), received a total grant of $14.82 million and will use most of that amount to subsidize loans for water system improvement projects addressing public health protection. The grant will also fund other activities including: contracts to provide operation, maintenance and managerial technical assistance to small public water supplies, source water protection, public water supply program functions, operator certification, capacity development and administration of the DWSRF program.

This grant represents the culmination of several years of effort by many individuals and organizations to secure additional funding for water system improvement projects in Montana. The 1995 Montana legislature created and funded the DWSRF which will be implemented by DEQ in cooperation with the Department of Natural Resources and Conservation (DNRC). The revolving fund, which uses the principal repayments on loans to make future loans, will offer loans for construction of water system improvements at interest rates below those in the commercial market. This program will be similar to the water pollution control state revolving fund program (WPCSRF). The majority of the funds comes from a capitalization grant from the EPA, while Montana provides a required 20 percent match.

The DWSRF program is part of the DEQ Technical and Financial Assistance Bureau and is staffed by Mark Smith, section supervisor, Marc Golz, senior engineer, and Terry Anderson and Gary Wiens, environmental engineers. DNRC staff, Anna Miller and Bob Fischer, provide financial and technical expertise.

For more information about the drinking water revolving fund program contact:

Drinking Water SRF Program
Department of Environmental Quality
P.O. Box 200901
Helena, MT 59620-0901
(406) 444-6697

Department of Natural Resources and Conservation
P.O. Box 201601
Helena, MT 59620
(406) 444-6668

New DWSRF staff, Terri Anderson, Marc Golz, and Gary Wiens, are pictured below:

DOE Special Projects: Alliance for Industrial Excellence Energy Efficiency in Montana's Water and Wastewater Facilities

The State Revolving Fund (SRF) Programs and the State Energy Program are both part of the Technical and Financial Assistance Bureau in the Department of Environmental Quality (DEQ). Coordination between these two programs provides an opportunity to effectively provide technical services in the area of energy efficiency to water and wastewater facilities in Montana.

These vital public facilities are often the biggest energy consuming operations for local governments. In August, 1997 DEQ received a Special Projects grant from the Department of Energy (DOE) Industrial Programs to provide educational opportunities for energy conservation for operators, designers and local building officials. The grant also proposed to develop partnerships between public financing programs and the utilities in order to take advantage of opportunities to conserve energy by designing energy efficient facilities.

The cross-program team was comprised of technical staff from both the water and energy programs. The team investigated ways to achieve energy efficient design throughout the technical review process. Staff engineers reviewed the requirements for energy efficient designs in their facility financing programs and found that efficiency is already a component in environmental impact review, innovative methods of energy recovery and evaluation of operating costs in the grant and loan technical review process. New SRF review procedures drafted this year did not include specific reference to energy efficiency in design due to review process streamlining. Since energy efficiency in the design phase of the review process provides economic benefits as well as an environmental, the team decided that the goals to promote energy efficiency could be effectively supported through non-regulatory methods.

Educational programs to raise the awareness of energy issues in water and wastewater facilities were developed. Technical sessions used existing training networks serving water and wastewater operators and consulting engineers. Sessions on energy efficient technologies were delivered by noted instate speakers so that information would be more relevant to equipment and processes used in Montana.

The Montana Local Government Energy Office (MLGEO) was involved with the planning of educational sessions aimed at local government decision-makers. MLGEO will deliver on-site workshops to officials of towns and present an overall general discussion of energy efficiency issues at the state annual conference in the fall. DEQ assisted MLGEO in targeting communities that are planning facility improvements.

Technical sessions on energy conservation will continue through the rest of 1998 as DEQ continues to promote educational and design opportunities for energy conservation in water and wastewater treatment facilities. Evaluations and feedback from these activities will be analyzed by the team to determine their effectiveness and what the future needs are within this area. DEQ will assist MLGEO in developing programs for government officials, which will be presented in workshops for local government officials this fall.

The project team will investigate non-regulatory methods of supporting energy efficient design options through the public financing programs, technical services, and utility programs. The team will evaluate potential savings in design and operation of facilities. Recommendations will be developed for sustaining efforts in on-going programs.

WATER AND WASTEWATER OPERATOR CERTIFICATION NEWS

by Shirley Quick, Certification Officer, DEQ

INTRODUCING SOME NEW FACES AT THE CERTIFICATION OFFICE

To help provide a better service to the operator community and the public, the certification office has hired two new staff members:

Tom Sanburg started as the certification technician on December 8, 1997. Tom has been a DEQ employee for approximately three years prior to coming to the certification office. Tom is active in his local Montana National Guard unit and will be spending three weeks this summer in the Mojave Desert. Tom is responsible for coordinating the examination and renewal processes, and assisting Shirley with responding to requests from the public. If you have a question about an upcoming exam or your renewal payments, call Tom at 444-3434. **Tausha Smith** started as the new certification clerk at the Water and Wastewater Certification Office on June 15, 1998. Tausha was previously working as a temporary employee for the Public Water Supply Section. Tausha has 7+ years of experience working for Capital Answering Service in Helena, both as an operator and as their office manager. Her experience in dealing with the public as well as her clerical skills will be a definite asset to our team. Tausha will be responsible for tracking all continuing education credits for operators as well as assisting Shirley and Tom. If you have questions on your CEC status or to request an application to take an exam, call Tausha at 444-4584.

The three of us are looking forward to serving you better in the future with this addition in staff, but please be patient with us during the training process for the new staff members.

CHANGES ON THE WATER AND WASTEWATER OPERATORS' ADVISORY COUNCIL

Bob Cottom of Dillon was reappointed in October of 1997 to his second term on the Council. Bob is the assistant director of operations for the City of Dillon and has been a certified operator since 1976. Bob is the Council member who holds any classification of wastewater certification.

The last meeting of the Water and Wastewater Operators' Advisory Council in September 1997, was also the last for **Warren Jones, Ph.D.** Warren is an assistant professor of the MSU College of Engineering and served as the Council member on the faculty of a university. During his term on the Council since 1993, he played a major role in the revision of the new water study materials and exams, as well as the new formula sheet. Unfortunately, because of other commitments, he could not complete his term on the Council but will still act in his role of director of the fall water school held each year in Bozeman.

Carol Reifschneider, Ph.D., has been appointed by Governor Racicot to complete Warren's term on the Council. Carol is an assistant professor at MSU-Northern's water quality department and has been a certified operator since 1996. Carol has served on the Continuing Education Credit Review Committee for the last year. Carol also has the distinction of being the first woman to be appointed to this Council.

With the changes in Council members, there also comes a change in the leadership of the Council. **Lee Leivo**, district manager for the Bigfork Water and Sewer District was elected as chairperson, and **Bob Cottom** as vice chair. Lee takes over from **Mike Holzwarth** who did a great job as chairperson for the last several years.

THREE DAY NOTIFICATION LAW!

PLEASE NOTE that section 37-42-307(2), of the Montana Codes Annotated, requires that "any person, firm, or corporation, both municipal and private, **shall notify the department within 3 business days** after termination if a certified water or wastewater operator terminates employment."

Therefore, when the operator of a system changes employment, the system and the operator must call Shirley Quick (444-2691) at the DEQ certification office immediately!

Also call when the **system or operator addresses** change. If you want to continue to receive training and certification information, please notify us so we can update our records. Several renewal notices were returned by the post office this year because we were not informed of address changes.

CECRC ANNOUNCES EXCITING NEWS FOR WATER AND WASTEWATER OPERATORS!

In August of 1995, the **Continuing Education Credit Review Committee (CECRC)** was formed at the request of the Water and Wastewater Operator Advisory Council (Advisory Council) in response to a need for more support for the certification office when making decisions on the approval of training for CECs. The mission and goal of the committee are:

MISSION: To provide guidance and support to the Advisory Council and the water and wastewater operator certification program concerning issues related to continuing education requirements.

GOAL: To promote consistent and quality training opportunities for certified operators.

The current members of the CECRC are: **Curt Myran**, Advisory Council non-voting member. Curt is the public utilities director for the City of Miles City. **Gary Workman**, large community operator member. Gary is the safety and training officer for the City of Billings Public Utilities Department. **Lee Wolfe**, small system operator member. Lee is a contract operator for seven small systems in Helena. **Rory Schmidt**, Montana Rural Water System (MRWS) member. Rory is a program specialist for MRWS and coordinates all MRWS training. **Judy Sass**, Midwest Assistance Program (MAP) member. Judy provides on-site assistance as well as training to small systems. **Carol Reifschneider**, MSU-Northern member. Carol is an assistant professor at MSU-Northern. **Barb Coffman**, Montana Environmental Training Center (METC) member. Barb is the training specialist for METC. **Shirley Quick**, DEQ member. Shirley is the program manager of the water and wastewater operator certification program.

CERTIFICATION RULES BEING REVISED TO INCORPORATE CEC CHANGES!

The CECRC has accomplished a great deal since it has been in existence. The DEQ is in the process of revising the operator certification administrative rules to incorporate their suggestions.

Approval of dual CEC courses!

The first suggested addition to the certification rules is that the certification office should allow **dual CECs** for courses approved for both water and wastewater. This means an operator who holds certificates in both water and wastewater, would earn the full amount of CECs from the dual CEC approved course for both the water certificate and the wastewater certificate.

For example, if an operator has a Class 1A (water) and a Class 1C (wastewater) certificate and attends an approved dual CEC course worth 0.7 CECs, the operator would be credited with both 0.7 CECs toward the 1A CEC requirement **and** 0.7 CECs toward the 1C requirement.

Keep in mind that **not all courses may be approved for dual CECs**. To determine if a course has been approved as a dual CEC course, an operator should need to check with the training provider. Examples of some of the courses that **MAY** be approved are disinfection, environmental, ground water protection, professional development, pumps and motors, and safety. Please note that **all courses will need to go through the approval process to determine if it qualifies as a dual CEC course before dual CECs will be awarded**.

DEQ is in the middle of the rule revision process at publication date of the *Clearwater*, but we hope to put this new policy into effect for this CEC biennium, which started July 1, 1998.

Rules being revised to allow approved training providers!

Another major revision to the certification rules being suggested by the CECRC is to allow the approval of training providers. The CECRC has spent a great deal of time during the last two years drafting the *Approved Training Provider (ATP) Guidelines for Montana's Water and Wastewater Operator Certification Program.*

Although the Administrative Rules of Montana already refer to approved training providers in

17.40.213, additional clarification will be needed for this as well. The existing rule states:

"(6)(a) There are 3 types of education offerings that qualify for continuing education credit:

(i) training courses offered by the department;

(ii) courses or conferences specifically approved for credit by the department; and

(iii) **training courses or conferences offered by department-approved training organizations**. The organization must first apply to the department for approval and demonstrate, in writing, that training is one of its principal programs. Based on the submittal, the department may, in writing, approve the organization for education offerings under this subsection for up to a 2-year period. The department may also revoke the approval at any time, citing the reasons for its revocation."

The advantages of getting ATP approval are that the training organization: 1) has authority to make the determination if their course meets CEC requirements (using the ATP guidelines), and 2) would only need to notify the certification office that the course is being presented as well as the information on the operators who attend.

The following training organizations have been approved as ATPs for this CEC period:

ATP1: City of Billings, Public Utilities Department
ATP2: Montana Environmental Training Center
ATP3: Montana Rural Water Systems, Inc.
ATP5: City of Bozeman WWTP
ATP6: City of Kalispell WWTP
ATP8: Colstrip Community Services Company
ATP9: Midwest Assistance Program, Inc.
ATP10: Mountain Water Company

MONTANA AND THE PROPOSED NATIONAL CERTIFICATION GUIDELINES

The comment period for the public review of the USEPA *draft Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems* ended June 25, 1998.

These draft guidelines, as required by the reauthorization of the Safe Drinking Water Act of 1996, consist of nine baseline standards. These standards were developed utilizing two EPA appointed working groups. The baseline standards include 1) authorization, 2) classification of systems, facilities, and operators; 3) operator qualifications; 4) enforcement; 5) certification renewal; 6) resources needed to implement the program; 7) recertification; 8) stakeholder involvement; and 9) program review. The Montana operator certification program reviewed these draft guidelines and submitted their comments to EPA in June. Comments from all interested parties will be reviewed by USEPA and the working groups and finalized by August, 1998. All state certification programs will then have until February 2001 to adopt and implement these guidelines into their programs.

How Montana looks in relation to the four major guidelines:

Authorization: Would require all states to have a program cover all community and nontransient, noncommunity systems. Montana already does that with the new legislation that requires nontransient systems to have a certified operator as of July 1, 1998.

Classification of Systems, Facilities and Operators: Would require all community and nontransient systems to be classified and that they must all have at least one operator in responsible charge. Again, Montana already does that.

Operator Qualifications: Eligibility requirements for each level of operator are left up to the state, with minimum standards being outlined. The minimum standards would require operator applicants to 1) take and pass an exam; 2) have a high school diploma or GED; and 3) have a minimum amount of on-the-job experience. Again, Montana meets all the minimum requirements.

Enforcement: States must have enforcement rules directed toward the system owner and the operator. Again, Montana meets this requirement.

Although there are no guarantees, if the USEPA guidelines are adopted as drafted and Montana's program is approved, we should not have to suffer through too many drastic changes to our certification program. This would be good news for all of us, since that should mean that Montana's operators should not see any changes to their certification requirements.

RESPONSIBILITIES OF A CERTIFIED OPERATOR

The certification office has received several phone calls recently from systems and operators asking what the responsibilities are for a certified operator. The Administrative Rules of Montana 17.38.249(1) states: "The supplier of water for community systems shall designate, no later than 30 days after the effective date of this rule, a person who shall be responsible for contact and communications with the department in matters relating to system alteration and construction, monitoring and **sampling**, maintenance, operation, record keeping, and reporting. **This person must be certified** in accordance with the requirements of Title 37, chapter 42, MCA." These requirements will also apply to non-transient systems beginning July 1, 1998.

As an overview for all of us, here is the **list of responsibilities** that all applicants receive with their initial application for certification:

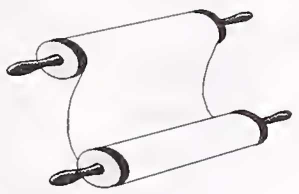
1. **Sampling and monitoring** to meet extensive legal requirements.
2. **Keeping records** for #1 above.
3. **Being readily available** to:
    a. act on sampling, monitoring and reporting to regulatory agencies;
    b. respond to system inspections, system users or DEQ personnel;
    c. react to system malfunctions.
4. **Issuing notice to users** when the systems are not in compliance and there is a health risk.
5. **Protecting, maintaining and operating equipment** purchased at public or user expense to provide safe drinking water in adequate supply or process safe effluent.
6. **Keeping records** on the system maintenance program for #5.
7. **Calculating and making chemical applications or removals** in order to protect public health or state waters or parts of the system.
8. **Understanding and preventing** what may endanger a safe drinking water supply or wastewater effluent or equipment used to do the same.
9. Assuring that newly installed or repaired equipment or systems **meet legal requirements** adopted to protect the public health and environment.
10. **Notifying the DEQ** of the termination of your responsibilities to a system and advising your replacement that he/she requires certification.

System users expect "whatever it takes" will be done to provide safe water and to protect our state waters. Often they don't realize what's involved. Well, here is a list to show them!

CONTRACT OPERATOR REQUIREMENTS

The responsibilities list is also a good reference tool for systems who are thinking of hiring a contract operator. **Review this list with the prospective contract operator** to be sure they can provide this service for you. Other important points to clarify are: 1) that the contract operator has the proper classification of certification to operate your system; and 2) that there is adequate backup so that your system will be covered during times when the main operator is on vacation, sick or attending to another system they have under contract.

By doing some thorough checking at the beginning, using a contract operator can be an excellent way to meet the certification and sampling requirements of your system. Also remember to keep the certification office informed of any change in operator status within the three working day notification period.



APPLICANTS PASSING EXAMINATIONS FOR FULL CERTIFICATION OR OPERATOR-IN-TRAINING (*OT*) 1998 SPRING WATER SCHOOL

NAME	**CITY**	**CLASS *1*'S**
ALCORN, Perry	Havre	1D OT
BUSS, Dana S.	Glasgow	1B
CASEY, Bob	Havre	1B OT
HOCKENBERRY, Tim	Whitehall	1A
LAUMAN, Phillip J.	Somers	1C *OT*
MILAM, David B.	Havre	1D *OT*
SCHARF, Darrell R.	Whitehall	1A
SMITH, Fredrick	Havre	1C *OT*
USURIELLO, Mathew	Havre	1B *OT*
VOSEN, Scott	Havre	1B *OT*
WEISSER, Rick J.	Havre	1C *OT*
WHITTENBERG, Mark	Billings	1C *OT*

NAME	**CITY**	**CLASS *2*'S**
ALLSOP, Thomas G.	Pinesdale	2B
CRICK, Gary	Billings	2A
FRANKS, Robert C.	Whitefish	2C
HULSE, Tom E.	Billings	2C
OLSEN, Timothy S.	Wolf Point	2A3B *OT*
PAYNE, William R.	Absarokee	2B *OT*
PORAZZO, Tony G.	Polson	2A
ROACH, Mark C.	Billings	2A
SHELINE, L.C.	White Sulphur	2B *OT*
THOMSON, Jack	Lakeside	2A3B *OT*

NAME	**CITY**	**CLASS *3*'S**
ALSOP, Thomas G.	Pinesdale	3A
COUNTRYMAN, Dennis	Troy	3A4B *OT*
HALLORAN, Shari A.	Columbia Falls	3A4B
HERRINGTON, William	Townsend	3C *OT*
KAIN, Richard S.	Missoula	3A4B
KALET, Steve W.	Bozeman	3C *OT*
KALLENBACH, Thomas	Bozeman	3C *OT*
LITTEL, William D.	Big Timber	3C
MATHESON, Brian K.	Conrad	3A
MCHUGH, Peter J.	Helena	3A4B
MOSBRUCKER, Steven	Corvallis	3C *OT*
NORMAN, David C.	Troy	3A4B *OT*
O'CONNOR, Brent M.	Fort Benton	3A4B
PAYNE, William R.	Absarokee	3A
PATTEE, Dan D.	Frenchtown	3A4B
RAUSER, Timothy	Townsend	3C *OT*
ROARK, Brian D.	Oilmont	3C
ROGNRUD, Loren D.	Helena	3A4B
RULE, William J.	Great Falls	3A4B *OT*
VAILE, Theresa	Babb	3C *OT*

NAME	**CITY**	**CLASS *4*'S**
APPLE, Andy G.	Whitefish	4AB *OT*
BARRUS, Mort J.	Rosebud	4AB
BJORK, Greg L.	Polson	4AB *OT*
BROWN, Pete L.	Lima	4AB
BURR, James L.	Decker	4AB
CHEMAN, Mary J.	Kalispell	4AB
CONDIE, John W.	Bozeman	4AB
DAVIS, Laurie A.	East Helena	4AB
DOWNER, Ronald J.	Gallatin Gateway	4AB
DUDLEY, W. Wayne		4AB *OT*
DYCK, Calvin R.	Whitefish	4AB *OT*
ENTZ, Paul	Cut Bank	4AB
ERICKSON, David J.	Butte	4AB *OT*
ERICKSON, Elizabeth	Buttte	4AB *OT*
GRAHAM, David G.	Polson	4AB *OT*
GUNN, Boyd M.	Harrison	4AB *OT*
HAWKALUK, Albert M.	Charlo	4AB
HOFER, Daniel P.	Wolf Creek	4AB
HOFER, David J.	Rimrock Colony	4AB
HOFER, John D.	Cut Bank	4AB *OT*
HOFER, Philip J.	Rimrock Colony	4AB
HOWARD, Dee W.	Ryegate	4AB
JARRETT, Alan F.	Great Falls	4AB
JENKINS, David L.	Bozeman	4AB
KALET, Steve W.	Bozeman	4AB
KALLENBACH, Thomas J.	Bozeman	4AB
KARL, Hal	Bonner	4AB
KERNER, Christopher	Hamilton	4AB
KLEINDORFER, Stanley R.	Virginia City	4AB *OT*
LARSON, David C.	Crane	4AB *OT*
LOVSHIN, Calvin J.	Warm Springs	4C *OT*
MATSON, Phil	Missoula	4AB
MCDONALD, Cody B.	Buffalo	4AB
MCGINLEY, John	Lima	4AB
MCGOWAN, Patrick	Missoula	4D
MCGOWAN, Patrick E.	Missoula	4AB
NESLAND, Levine	Turner	4AB
NORMAN, David C.	Troy	4B
O'NEIL, Steve A.	Bozeman	4AB *OT*
PORTER, Ellen E.	Missoula	4AB 4D *OT*
PRICE, Billy K.	Great Falls	4AB *OT*
RASMUSSEN, Mike L.	Clancy	4AB *OT*
RATCHYE, James C.	Lakeside	4AB
RICHARDSON, Daniel E.	Olney	4AB
RIEBE, Richard A.	Missoula	4AB

KEY

A = Water Distribution Operator
B = Water System Operator
AB = Well Water System Operator
C = Wastewater System Operator
D = Industrial Wastewater System Operator
ot = Operator-in-training

NAME	CITY	CLASS 4'S
ROSS, David A.	Missoula	4AB
SEYMOUR, Robert S.	Rocker	4AB *OT*
SINGER, Michael	Olney	4AB
SMITH, Franklin C.	St. Regis	4AB
STANTUS, Paul A.	Libby	4AB *OT*
STREETER, Larry O.	Kalispell	4AB *OT*
SUMMERS, Robert L.	Clancy	4AB
TORGERSON, Clint L.C.	Gallatin Gateway	4AB
TOTTEN, Leon (Jeff) C.	Eureka	4AB
TRUE, Donald E.	Kalispell	4C *OT*
TYMOFICHUK, Barb	Opheim	4C 4AB *OT*
TYSON, Ben	Helena	4AB *OT*
VAN MATRE, Kevin R.	Fairfield	4C *OT*
VANDERPAS, Charles N.	Bozeman	4AB
VOKAL, Ronald A.	Billings	4AB
WALDNER, Zach M.	Cut Bank	4AB
WILLIAMS, Robert J.	Kalispell	4AB *OT*
WILSON, Mark E.	Missoula	4AB
WURZ, William P.	Hillside Colony	4AB *OT*
WYCOFF, Larry W.	Helena	4AB *OT*

KEY

A = Water Distribution Operator
B = Water System Operator
AB = Well Water System Operator
C = Wastewater System Operator
D = Industrial Wastewater System Operator
ot = Operator-in-training

NAME	CITY	CLASS 4'S
BALES, Bill	Kalispell	5AB
BENNETT, Thomas L.	Alberton	5AB
BONDY, Richard	St. Ignatius	5AB
BRIGGS, Daniel C.	Thompson Falls	5AB
BUNDY, Duane E.	Miles City	5AB
CARPENTER, Scott P.	Fairfield	5AB
CERNICK, Stewart M.	Libby	5AB
CONLEY, Nancy A.	Hamilton	5AB
DAMM, Kenneth R.	Miles City	5AB
DELVIN, Theodore E.	Chinook	5AB
ENGLUND, John	Chester	5AB
ERICKSON, Leigh R.	Plum Creek	5AB
FISCHER, Eldora	Fairfield	5AB
GRIFFIN, John J.	Clinton	5AB
HENRY, Thomas H.	Missoula	5AB
HILTON, Carla I.	Townsend	5AB
KNABLE, Luana F.	Bozeman	5AB
LARSSON, Robert	St. Ignatius	5AB
LEAF, Basil	Elliston	5AB
LIEN, Michael D.	Polson	5AB
LOUDERMILK, Andrew S.	Kalispell	5AB
LYONS SR., Dane C.	Willow Creek	5AB
MCCARTHY, Linda S.	Dupuyer	5AB
MEE, LeeRoy F.	Trego	5AB
MESSER, William R.	Missoula	5AB
MILLER, Russell J.	Columbia Falls	5AB
MOTHERSHED, Douglas	Big Timber	5AB
NELSON, Joseph R.	Fortine	5AB
OPPEGARD, Charles W.	Sula	5AB
PALMER, Karen P.	Hall	5AB
PARKS, John C.	Dillon	5AB
PETRINI, Joe T.	Helena	5AB
PHILIPPS, Elmer	Conrad	5AB
POTTER, Mark N.	Polson	5AB
RADKE, Randy R.	Sidney	5AB
SALMONSON, Mark J.	Arlee	5AB
SCOW, Jay E.	Helena	5AB
SMART, Eric	MCS Envir.	5AB
SNEDIGAR, Roland W.	Fortine	5AB
SOL, Scott	Thompson Falls	5AB
STOCKTON, Marla	Avon	5AB
TRUE, Donald E.	Kalispell	5AB
VARLAND, Merle L.	Augusta	5AB
WARBURTON, Laura	Chinook	5AB
WEAVER, Tim	Thompson Falls	5AB
WELLBORN, Jennie L.	Huson	5AB

CONGRATULATIONS! To all of the above operators who passed their examinations during 1998. The examinations for certification require considerable time in study and preparation. Passing the examination represents a lot of hard work and initiative on the part of the individual. Be sure to show your appreciation to your water and wastewater operator for working hard to ensure that they are properly trained to care for your system!

Don't Forget!

Spring Water & Wastewater Exams

will be held in

Seven Locations
March 1999

To receive application information, please either call the Certification Office at (406) 444-3434, or return the bottom of this page to:

Department of Environmental Quality
Water & Wastewater Operator Certification
PO Box 200901
Helena MT 59620-0901

Water & Wastewater Operator Certification

Please send me information on the following exam:

☐ Billings
☐ Great Falls
☐ Havre
☐ Helena
☐ Kalispell
☐ Miles City
☐ Missoula

	1	2	3	4	5
A - Water Distribution	__	__	__	__	__
B - Water Treatment	__	__	__	__	__
C - Wastewater Treatment	__	__	__		

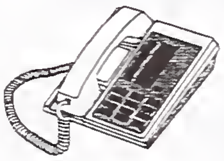
Name: ______________________________ Operator #: ______

System Name: ______________________________

Mailing Address: ______________________________

City/ State/ Zip: ______

Department of Environmental Quality
P.O. Box 200901
Helena MT 59620-0901



Frequently Called Numbers

Name	Position	Office #	Fax #
Mark Simonich	Director	444-2544	444-4386
Permitting & Compliance Division		444-4323	444-1374
Jan Sensibaugh	Division Administrator	444-5270	
Community Services Bureau			
Jon Dillard	Bureau Chief	444-2409	
Operator Certification Office			
Shirley Quick		444-2691	
Tom Sanburg		444-3434	
Tausha Smith		444-4584	
Public Water Supply			
Jim Melstad	Section Supervisor	444-5315	

Name	Phone # 444-	Surface Water Trtmnt	Training	Lead & Copper Rule	Phase II & V Rule	Eng Plan Rvw	Total Coliform Rule	GWU DISW*
John Camden	4071	X	X				X	X
Terry Campbell	5311			X	X	X		X
Rick Cottingham	4019	X	X				X	X
Rick Duncan	3425						X	
Sandi Ewing	5314						X	
Denver Fraser	5312	X	X			X		X
Craig Pagel	5313				X	X		
Vacant	4769	X	X					
Vacant	4071	X						X
Vacant	4114			X		X		

MWEA NATIONAL DIRECTOR'S REPORT

WELCOME TO MWEA'S NEW NATIONAL DIRECTOR

The Montana Water Environment Association (MWEA) membership selected Scott Anderson to serve as National Director for MWEA to the Water Environment Federation Board of Directors for the next three years. Scott, an engineer for Neil & Consultants, Helena office, formerly served a long and distinguished career for the state of Montana in the Department of Health and Environmental Sciences. Most wastewater treatment plant personnel in the state know Scott and are working in facilities that he helped get built under the EPA Construction Grants program and the State Revolving Fund program.

Scott has served MWEA in a variety of offices throughout the years. He not only sat on the executive committee, finally serving as president of MWEA, but acted as Executive Secretary and was awarded the prestigious Bedell award for his service to the MWEA membership. Welcome aboard Scott. We know you will do a great job! Scott will be traveling to Orlando, Florida this fall to attend the WEFTEC conference and will be inducted to the Board of Directors during the conference.

SO LONG FROM THE OUTGOING DIRECTOR

Since this is the end of my three-year term as National Director for MWEA, I would like to thank all of the MWEA membership for their support. The friends and professionals that make up MWEA are truly outstanding individuals. Montana is fortunate to have people of such high quality and I will miss working with all of you. We often see only the negative aspects of things that happen in our state and the rest of the world, so I must take this opportunity to say thanks to the MWEA committee chairs and officers who generously give of their time and energy. Montana would be a far poorer place if it weren't for all of you; and you know who you are.

HOWDY TO MWEA NEW OFFICERS

MWEA says a big thank you to Todd Teegarden for his service as Executive Secretary for the past three years. Todd did a tremendous job and will be hard to replace. However, we have selected Dana Audet, US Filter/EOS from Great Falls, as his replacement and know that Dana will do a great job for us in the years to come. Serving as president, replacing the irrepressible Paul Montgomery, is Mike Jacobson, Public Utilities Supervisor for the City of Great Falls. Our new Junior Trustee is Boris Krizek of the Billings Public Utilities department. Our other officers are: Karen Bucklin Sanchez, President-elect and newest member of the Select Society of Sanitary Sludge Shovelers; Dorothy Bradley, Vice President and Director of the Montana Water Center at MSU; and Bob Morrison, Senior Trustee and Office Manager of the Morrison-Maierle engineering firm in Great Falls. Good Luck to all of you throughout the next year as MWEA strives to bring information to the Montana public and prepares for the conference next year in Billings.

MWEA AWARDS FOR THE 1999 JOINT CONFERENCE

GEORGE W. BURKE, JR. AWARD

MWEA will be selecting a Wastewater Treatment facility to honor with the Water Environment Federation Burke award for 1998. **Self-nominations are accepted.**

This award was established in 1982 in honor of George W. Burke, Jr., for his many years of service to both the water environment field and the water Environment Federation as staff manager of technical services. Mr. Burke was instrumental in developing the Federation's annual safety survey and assisting in the production of several safety training aids and promotional packets. The BURKE award encourages an active and effective safety program in municipal and industrial wastewater facilities. The facility should have at least one employee active in the Member Association or Federation. It is recommended that the facility participate in community safety education efforts, such as the MWEA Safety Committee or the community safety committee, that a philosophy of no lost-time-accidents be prominent in the safety program, have a good safety record and that the safety program include training, meetings, planing, accident review and other important safety innovations. Past winners of this prestigious award are:

WEOS/Great Falls WWTP	**1992**
City of Billings WWTP	**1995**

MWEA OPERATORS AWARD

The Montana Water Environment Association (MWEA) Operators' Award is presented to an operator, supervisor or manager of a wastewater treatment plant who, through their outstanding performance and professionalism, deserves commendation. The individual shall have been directly involved with measures that have improved public awareness of the goals of wastewater treatment, and shall have contributed to the dissemination of information concerning advancements in the field of wastewater treatment. The recipient must be a certified operator, but need not be a member of the MWEA. Past winners of this prestigious award are:

Raymond Armstrong	**1984**
Michael Garrity	**1987**
Fred Wendt	**1990**
Tim Hunter	**1993**
Dave Haverfield	**1996**

MWEA SMALL SYSTEMS AWARD

MWEA selects a small community wastewater facility that is exceptionally well-run and maintained to honor each year. The facility and staff usually meet high standards for the following criteria:

- Treatment efficiency, economy, performance, innovation, and advancement of treatment technology.
- Good recordkeeping, public relations, public education, financial solvency, safety and O&M programs.
- Additionally, these facilities have good relationships with community administration and provide community contributions.

This award is presented annually and has the name of the community inscribed on it. Previous winners have been:

Ekalaka	**1992**
Corvallis	**1993**
Deer Lodge	**1994**
Harlem	**1995**
Whitehall	**1996**
Amsterdam/Churchill	**1997**
Yellow Bay	**1998**

MWEA BIOSOLIDS AWARD

This is a new award that the MWEA Biosolids Committee is instituting to promote beneficial use of Biosolids and to reward facilities or communities that take an active role in beneficial use of Biosolids. Previous winners have been:

Bigfork Water & Sewer District	**1996**
Glacier Gold Composting	**1997**
City of Hamilton (Hon. Mention)	**1997**
City of Helena	**1998**

SELECT SOCIETY OF SANITARY SLUDGE SHOVELERS

The members of this group are best identified by their winning personalities and the little golden shovels worn on their lapels, ties, collars etc. Membership in this fun-loving group is established on nebulous criteria developed by the influent integrator, Tim Hunter, HDR Engineering. Call him if you want more information.

Please submit nominations for these awards to Bill Bahr, MWEA Awards Committee Chair at:

PO Box 200901, Helena, MT 59620-0901

1999 JOINT CONFERENCE CALL FOR PAPERS

The Program Committee has issued a Call for Papers to be presented at the 1999 Annual Conference scheduled in Billings. The Conference's technical sessions will be developed from both submitted and solicited papers. Papers should be on a subject of specific interest to Montana: water, wastewater or solid waste treatment; conservation; corrosion control in water distribution systems; alternative treatment and disinfection processes; pilot studies; biosolids management, etc. Presentations are typically 30 minutes in length. Written papers may be used to present more extensive and comprehensive topics. Papers will be chosen from abstracts or ideas submitted on or before **October 31,1998** .

Please complete a copy of this submittal form and attach a copy of your abstract. Abstracts must be no longer than 500 words in length (two pages, double-spaced) and should include the speaker's name.

Abstract Submittal Form: (a copy of this form must accompany all abstracts)

Title of Paper:

Speaker:

Co-authors:

Affiliation:

Street Address:

City/State or Province/Zip: Daytime Phone: Fax:

Audio/visual need (check items required for presentation):

Slide projector Video Overhead projector

Speaker Biography: (Use back of this form, or submit attached biography)

If you are not interested in giving a paper but have burning issues you would like addressed, please contact the Program Committee at the address listed below with your suggestions. Copies of abstracts or written suggestions should be sent to:

MSAWWA/MWEA
505 South Roberts
Helena, Montana 59620
(406)443-5388
Or Fax to: (406) 443-5656

MONTANA SECTION AWWA
DIRECTOR'S REPORT
JULY 1998

The AWWA Board of Directors met for a series of meetings at the AWWA Annual Conference in Dallas, Texas on June 20-25, 1998.

The following summarizes activities and events of these meetings and the conference in general:

1. The candidates for incoming president-elect are:

    a. Larry Phillips - Alaska Section Director and currently AWWA Vice President
    b. Frank Pogge - Chair of Standards Council
    c. Ron Schwarzwalder - Ohio Section Director and currently AWWA Vice President
    d. Bob Willis - Pacific Northwest Section and immediate past Director Vice President

    The Board of Directors will be voting for the office of president-elect at the winter board meeting. If you have any thoughts about any of these candidates, I would like to hear from you so my vote best represents the feelings of the Montana Section.

2. The Treasurer's report indicated that AWWA is in sound financial shape and income is expected to exceed expenses again this year. A surplus of $514,000 was realized in 1997, and a $200,000 surplus is projected for 1998.

3. The Board voted to allow the Directors-at-Large to vote for the president-elect, but did not approve the Council chairs the same privilege.

4. The Board also gave final approval to the New Strategic Plan. As many of you know, the recently developed MSAWWA Strategic Plan has also been developed and is patterned after the AWWA version.

5. Water Industry Technical Action Fund (WITAF) asked for and received approval of revised dues rates for Utility, Associate, and Consultant Members, and was also extended a $350,000 line of credit by AWWA to cover their projected 1998 shortfall. This credit will be paid back with interested calculated ½% over the prime rate charged by U.S. Bank.

6. The Board approved partnering agreements with American Public Works Association (APWA), Water Environment Federation (WEF), and Associated General Contractors of America.

7. An amendment to the Association's by-laws was also enacted that states "The President, President-Elect, Immediate Past-President, and Treasurer shall not

concurrently hold another position on the Board of Directors.

8. AWWA is actively pursuing ways to enhance its ability to communicate information concerning drinking water. Television and the Internet are powerful means whereby information can be delivered, and AWWA is actively developing programs in these areas. I am particularly encouraged by this as I believe that having these communication means will increase our ability to deliver information in a timely and effective manner to all in need of it. This is particularly true for small sections like ours, and small water systems which we have plenty of in Montana.

9. The building addition to the Denver offices is progressing with occupancy scheduled for March 1999. In addition, AWWA is re-organizing at the staff level. This is being done in an effort to improve volunteer support and member services. The re-organization replaces the existing three division and 14 departments with eight groups. See attachment for description of these groups.

10. The Montana Section was again recognized for its work with the Water for People program, and on behalf of the Montana Section, I accepted a plaque recognizing the Section's efforts. This plaque has been forwarded to Chairman Fraser for future presentation to the Water for People committee.

11. As the Board liaison to the Small Systems Committee, I gave a report on the activities of this committee. These activities include:

    a. Capacity Development Video - this video was completed in June 1998 and distributed to all Sections.

    b. Small Systems Teleconference - the teleconference is still scheduled for March 1999, but is contingent upon funding.

    c. Section Small Systems Program Award - three applications were received for this award with first place going to a small system in Michigan. I believe the MSAWWA should look into this award and compete for it.

If you have any questions of me, please don't hesitate to contact me.

Charles S. Johnson III
National Director
Telephone: 721-4320
Fax: 549-6371
e-mail: dja@bigsky.net

MSAWWA/MWEA Joint Conference a Huge Success

The 1998 Annual Joint Conference was held at the Outlaw Inn in Kalispell and set new records for attendance. Nearly 150 attendees participated in the technical sessions and found new products and services among the 35 exhibit booths.

Al Goodman, current Vice President of the Water Environment Federation, and Marlay Price, AWWA Treasurer, presented up-to-date information on their respective organizations' activities and challenged all participants to become more involved in the development of regulations.

The MSAWWA Preconference Seminar focused on water distribution systems. Separate sessions were held for those interested in operations or design/engineering. The sessions also included an update on the new Montana Cross-Connection Control and Backflow Prevention Rules.

The following awards were given:

George W. Fuller Award	Al Towlerton, Billings Public Utilities
Arthur Sidney Bedell Award	Bill Bahr, Dept. of Environmental Quality
MWEA Biosolids Award	City of Helena
AWWA Operator's Meritorious Service Award	Lyle Maasch, City of Hysham
MWEA Small Systems Award	Yellow Bay Biological Station
MSAWWA/MWEA Donald G. Willems Scholarship Award	Autumn Bahr, Montana State University Barbara Woodbury, Montana State University

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MAKE PLANS TO ATTEND THE CONFERENCE NEXT YEAR!!!!

The Joint Annual Conference of the Montana Water Environment Association and the Montana Section of the American Water Works Association will be held at the Holiday Inn in Billings on April 28-30, 1999. Please make your plans to attend this conference early. The technical sessions promise to be exceptional again and the vendor exhibition seems to grow each year. If you have a topic you'd like to present or have scheduled during the conference, contact the organizers and let them know. The preconfernce will be hosted by MWEA on April 28. Plan to be there. The conference will include a variety of fun activities to go along with the technical program.

SEE YOU THERE!!!

NEWSWATCH TRENDS REPORT
INDUSTRY SLOW TO EMBRACE TECHNOLOGIES

The risk-averse nature of publicly owned treatment works (POTW) operators, designers, and regulators is one of the primary barriers to technological innovations and their use in the wastewater treatment industry, according to a report from the Environmental Law Institute (ELI) in Washington, D.C.

ELI, an independent, nonpartisan, non-profit organization looked at six different industries-wastewater treatment, electric utilities, pulp and paper, iron and steel, dry cleaning, and baking-to determine why environmental technologies seem to be developing at a slower rate than for technologies in other industries, such as computers and medicine.

In the wastewater sector, most of the approximately 15500 POTW's use activated sludge systems with chlorination to meet secondary treatment requirements, the report states. While such tried-and-true systems can treat relatively large quantities of wastewater in a small space, ELI argues that they also require substantial attention from operators, they consume considerable amounts of energy, and they produce residuals, such as solids, that must be treated and disposed.

Most innovative technologies, such as ozonation, ultraviolet disinfection, biological nutrient removal, enzyme treatment, and land treatment systems, are experiencing increased acceptance, but the barriers to implementation have been high, according to the report.

A distribution of innovative technologies installed at waste-water treatment plants during the last 10 to 15 years

Innovative technology	**Percent installed**
Aeration	11.4%
Clarifiers	10.9%
Sludge technologies	10.7%
Disinfection	9.4%
Lagoons	7.8%
Nutrient removal	7.7%
Oxidation ditches	7.0%
Filtration	5.3%
Energy conservation and recovery	5.0%
Land application of effluent	4.4%
Other	20.4%
Total	**100%**

Environmental Law Institute

AWWA Teleconference:
How to Comply with the USEPA's Risk Management Program Regulation

Section 112r of the Clean Air Act requires facilities that handle certain types and levels of chemicals to submit a comprehensive Risk Management Program to the appropriate government agencies. Water or wastewater systems that maintain at least 2,500 pounds of chlorine, 10,000 pounds of anhydrous ammonia, 20,000 pounds of aqueous ammonia, or 10,000 pounds of propane must comply with this regulation.

Risk management programs are detailed documents that take 6 to 12 months to prepare -- and the deadline for the final document is June 21, 1999. The program plan must include three major components -- a hazard assessment, a prevention plan and an emergency response plan. The development of the plan will involve working very closely with the Local Emergency Planning Committee in your area.

AWWA's next teleconference, October 22nd, will provide guidance to water and wastewater systems and other interested facilities on how this program can be developed. There will be six downlink sites in Montana -- Billings, Butte, Bozeman, Havre, Helena, and Missoula. A flyer will be issued about a month before the teleconference with more details on locations and times. For further information, contact Dean Chaussee at 406-443-5388.

FROM THE PRESIDENT OF MAWSS

Jim Hollandsworth

Well, I hope that you all remembered to send in your operator certification fee before the first of July. I know it's another expense and something else to remember, but being a certified operator, whether for water or wastewater, is something to be proud of and something to take seriously. As certified operators for our respective systems, we are assuming responsibility not just for making sure we do our samples on time ... Not just for keeping necessary records ... Not just for having the pump man's phone number where we know where it is ... What we do affects people's lives and livelihoods.

Having been a water operator for as long as I have, I've noticed that we water and wastewater operators are a lot like our pumps. We hardly get noticed for what we do until something goes wrong. Then we get noticed, but not the way we would like to be. When we are noticed, the status quo has usually been interrupted. People are out of water or there is a potential health risk involved.

So, if things are running along smoothly with no bad samples or pump problems or leaks, don't feel bad that you're not getting recognized for your great maintenance plan or for replacing that well cap with the bad seal before the little nasties got in. Getting noticed in this job is not all that desirable. But we can be proud when no one notices.

'Til next time, keep your fingers out of those sample bottles.
Jim

The Source Water Assessment Program

Activity Update

by Joe Meek, MT DEQ

The Montana Department of Environmental Quality (DEQ) is in the process of developing a Source Water Assessment Program to assist public water systems (PWS) in protecting their source of water. The development of this program is mandated by the 1996 Amendments to the federal Safe Drinking Water Act (SDWA) and generally will build on the existing voluntary Montana Wellhead Protection Program. The Source Water Assessment Program must identify the source of water used by PWSs through a process called delineation and then assess potential risks to the PWS within that delineated source water area. Additionally, the results of the assessments must be made available to the public.

The Montana Source Water Assessment Advisory Council met in Helena on June 29, 1998. This was the first meeting of the council which was appointed by DEQ director Mark Simonich pursuant to the requirements of the 1996 federal Safe Drinking Water Act.

The purpose of this council is to:

1. Provide a forum to ensure citizen viewpoints are considered concerning the desirability and appropriateness of the state's Source Water Assessment Program (SWAP) approach.

2. Ensure the technical feasibility and effectiveness of the state's SWAP approach in an efficient and cost-effective manner.

3. Develop and describe the mechanism by which the results of the source water assessments will be made available to the public.

4. Work with their constituents as the source water assessment program is implemented and advise the state on how to use the assessments in implementing prevention programs.

The Source Water Assessment Program Advisory Council membership generally represents both the technical community and citizens in planning for the development and implementation of the Source Water Assessment Program in Montana and will provide advice to DEQ in the process of developing a Source Water Assessment Program to assist public water systems (PWS) in protecting their source of water. The first meeting was largely informational to bring members up to speed on the SWAP. If you have questions or comments you may contact any of the members directly or call Joe Meek at the Department of Environmental Quality at (406)444-4806.

The names and addresses of the members are as follows:

Rep. Roger DeBruyker
HC 77 Box 8
Floweree, MT 59440

Deb Madison
Fort Peck Tribes
PO Box 1027
Poplar, MT 59255

Shelly Nolan
Havre Water Department
PO Box 1608
Havre, MT 59501

Marv Miller
MBMG
1300 W Park St.
Butte, MT 59701

Bill O'Connell
MRWS
2414 Elm St.
Butte, MT 59701

Starr Sullivan
WEF
196 Wagner
Florence, MT 59833

Denise DeLuca
Land and Water
1120 Cedar
Missoula, MT 59802

Richard Parks
Park's Fly Shop
Gardiner, MT 59030

Jack Stultz
Administrator
MT DNRC
Helena, MT 59620

Pat Graham
MT FWP
Helena, MT 59620

Robert Willems
MT Assoc. Of CDs
PO Box 281
Harlowton, MT 59036

Doug Parker
2501 Catlin
Missoula, MT 59801

George Algard
MT Dept. of Agriculture
Helena, MT 59620

Bruce Farling
Trout Unlimited
PO Box 7186
Missoula MT 59807

Joe Steiner
City of Billings
PO Box 30958
Billings, MT 59111

Mike Cobb
PO Box 289
Augusta, MT 59410

NONPOINT SOURCE POLLUTION

What is nonpoint source pollution? When you see rivers or streams become cloudy or discolored, you may be looking at nonpoint source pollution. This type of pollution can be easier to spot than to control.

Pollutants enter our waters from many sources. One way is from specific points, such as the discharge pipes of industry, which can contain untreated waste. This type of pollution can be monitored and controlled.

In contrast, nonpoint source pollution comes from many diverse sources and is harder to control. Major nonpoint sources of pollution include excess farm and lawn nutrients that move through the soil into the groundwater or enter local waters directly through runoff during heavy rains, uncontrolled storm water runoff from construction sites, forestry operations, animal wastes, and even pollutants released directly into the atmosphere.

From farmlands to suburban lawns, people use the land in ways that cause nonpoint source pollution. What are the pollutants? Nonpoint source pollutants include nutrients such as nitrogen and phosphorus from fertilizers, sediment from construction sites, pesticides from agricultural lands, salts from winter road treatment, and trace metals and toxic chemicals from inadequately protected landfills. Individually, these pollutants may not be a major concern, but taken as a whole they can result in widespread water quality problems.

The solution begins with us. There are many ways to reduce nonpoint source pollution. They include detention ponds for capturing sediment, buffer strips of vegetation separating farmed lands from nearby waters, seeding or mulching bare areas to help control erosion, and reducing pesticide and fertilizer use. Pollution prevention is essential to reducing nonpoint source pollution.

EPA RISK MANAGEMENT PROGRAM AFFECTS POTWs

A U.S. Environmental Protection Agency (EPA) chemical accident prevention rule will require many publicly owned treatment works (POTWs) to implement a risk management program and file a risk management plan by June 21, 1999. POTWs that store, handle, or produce the following chemicals above listed thresholds likely will be subject to the regulation:

- chlorine, 2500lb (1134kg);
- anhydrous ammonia, 10000 lb (4536 kg);
- anhydrous sulfur dioxide, 5000 lb (2268 kg);
- aqueous ammonia (concentrations 20% or greater), 20000 lb (9072 kg);
- methane, 10000 lb (4536 kg); and
- propane 10000 lb (4536 kg).

The risk management program, mandated under Clean Air Act Sec.112(r), requires POTWs and other facilities to identify hazards and manage risks to prevent serious chemical accidents and occurring.

The rule also would require:

- an analysis of a worst-case scenario should an accident occur;
- a 5-year record of accidental releases;
- coordination with local emergency response teams; and
- submission of a risk management plan to EPA

POTW risk management plans will be available to the public on the Internet.

Many POTWs may not need to adopt prevention requirements if they already are in compliance with the Occupational Safety and Health Administration's Process Safety Management Standard. However, the EPA rule is expected to improve the efficiency of daily operations by ensuring that workers are trained in proper procedures and by encouraging preventive maintenance.

EPA is working with the Association of Metropolitan Sewerage Agencies AMSA) to develop guidance on the rule for POTWS. The new guidance will reduce the cost of compliance by providing industry-specific information and analyses, according to EPA.

For more information, call EPA at (800) 424-9346 or AMSA AT (202) 662-1676. Copies of the rule and other technical assistance are available on the EPA Chemical Emergency Preparedness and Prevention Office Web site at http://www.epa.gov/swercepp.

STAFF CHANGES IN THE PWS SECTION

The Community Services Bureau/Public Water Supply Section of the Department of Environmental Quality has made several staff changes in the program. Mark Smith, Marc Golz, and Gary Wiens left the drinking water program to run the new Drinking Water State Revolving Fund program. This has created changes to the PWSS.

Terry Campbell was hired as Program Manager for Engineering Services. Terry is also known as Mr. Lead & Copper Jr. and brings five years of service with DEQ. He has 10 years of experience working with several Engineering firms throughout the state. Terry attended MSU-Bozeman and graduated from Montana Tech with a B.S. in Engineering Science.

John Camden was hired as Program Manager for Field Services. John is also known as Mr. Forms from the surface water operators and brings six years of service with DEQ. He also worked for the City of Helena as an operator for 14 years. John attended MSU-Bozeman and graduated with a B.S. in Commerce.

Rick Cottingham was hired as the surface water specialist for Field Services. Rick is also known as Mr. Trainer and brings six years of service with DEQ. He also worked for the City of Helena as an operator for 10 years, eight years with DNRC measuring stream flows and surveying, and one year with US Geological Survey. Rick attended MSU-Bozeman, Carroll College, and serviced time in the US Army Reserves (six years).

Denver Fraser was hired as an Environmental Engineer Specialist for Field Services. Denver is the son of Dan Fraser (former bureau chief of Water Quality). Denver has two years of consulting experience and performing Compressive Performance Evaluations on surface water treatment plants. He has been working with DEQ as a temporary employee. Denver attended Boise State University and graduated from Montana Tech with a B.S. in Environmental Engineering.

The program is hoping to have full staff by the end of September 1998. The PWSS staff appreciates your efforts in dealing with the limited staff. Every effort is made to respond to your requests. Our phone number is 406-444-4400 if you have any questions.

BOIL WATER ORDER - CITY OF KALISPELL

By

Greg Butts, Water Quality Specialist
Kalispell Regional Office

On June 30, 1998, the Department of Environmental Quality issued a Boil Water Order for the City of Kalispell, a city of approximately 12,000 residents in northwest Montana. Kalispell currently samples at 12 routine sites per month. Six samples are taken the second week of the month and six the following week. A routine sample taken on June 16 turned up with three colony forming units (CFU) per 100 milliliters of water. This prompted three-repeat follow-up samples. The operator had also taken six more routine samples on June 24.

On June 29 the lab called the City of Kalispell and the DEQ Public Water Supply Section and notified each that fecal coliform was present in two of the samples, one taken on the 24th and one taken on the 25th. This constituted an Acute MCL violation and the Boil Water Order was issued. The public was notified Tuesday afternoon (June 30) by radio and an investigation was launched to try and determine the cause or source of the contamination. Representatives from the city and the DEQ sampled and inspected each source and the water storage reservoirs. The inspection found that the covers on two of the storage reservoirs were leaky and allowed the intrusion of outside water and possibly contaminants whenever it rained.

The next day (July 1) plans were made to start chlorinating the whole water system. It was determined that sodium hypochlorite would work the best for this situation and calls were made to the City of Whitefish, Mountain Water in Missoula and the Public Water Supply Section (PWSS) in Helena to borrow chlorinator pumps. On Thursday morning (July 2) the City of Kalispell had five chlorine pumps and several barrels of sodium hypochlorite. With the help of the city operators, Ben Vandyke and Mike Ford, and myself, we had three wells pumping a total of 5000 gpm of chlorinated water by 4:00 p.m. that day. City workers flushed hydrants throughout the night to move the chlorinated water to all ends of the distribution system. By Friday morning (July 3) the chlorine residual throughout the system was between 2.0 and 2.5 mg/L. That afternoon operator Jeff Wolf collected fifteen bacteriological samples that covered the distribution system.

On Saturday afternoon (July 4) the results of the samples showed no contamination and the City requested that the Boil Water Order be lifted. The request was granted by Jim Melstad, Public Water Supply Section Supervisor, with the stipulations that the City of Kalispell continue to chlorinate indefinitely and repair or replace the leaky reservoir roofs. It was also suggested that the City work on a Cross Connection Control Program. Although the exact source of the contamination was not determined, the leaky roofs on two of the water storage reservoirs were definitely potential avenues for contaminants to enter the water system. Boil Water Orders are never fun for anyone involved, but they are learning experiences that teach us that our water systems need to be under constant scrutiny for deficiencies.

TRAVELS WITH DORIS

As I travel around the state and work with operators, I am always amazed at how creative they are. When they put their minds to it, they can come up with unique solutions to problems. Since operators have a great deal they could share with each other, I would like to find ways to make sharing ideas and solutions easy and efficient. This is one idea that you can all help to bring to reality.

Many operators and/or city offices now have e-mail addresses. It would be nice if a directory of facilities -- type and size, operator's names, and e-mail addresses -- could be published and distributed for all operators. In this way, if you have a problem and want to know if another operator has had the same problem and solved it, you could look up the facility types that are similar to yours and send the operators an e-mail message asking if they did have such a problem and if a solution was found. Just contacting operators to discuss your problem and brainstorming over e-mail could be of great benefit.

So, this is what I would like. All operators that have e-mail addresses send me the following information:

Name of Facility
Type of Facility (for example, three cell aerated lagoon)
When built
Size (for example, 0.5 MGD) and/or Population
Type of aerators, if you have them
Name of Operator
E-mail address (state whether e-mail is for the city or the operator)

When you send in this information, indicate how you would like it arranged (for example, by town, type of facility, etc.). I would then like to put the information in a booklet that operators can have. The booklet may be small at first, but we all started out that way and look at us now!

Oh yeah, send the information to me by e-mail. My e-mail address is:

Doris.Roberts@hi-line.net or Doris@hi-line.net

I attended a training conference in June -- trainers are also required to get training. During the conference a computer program was demonstrated. The program was designed to help wastewater operators run and evaluate their facility. I should be getting a copy in a month or so if the ferry doesn't break down while crossing the Mississippi and if the mule train is still running. I will take it with me as I travel around the state, so if you are interested in seeing it to determine if it is something you would like, let me know.

P.S. Doris and Bill Bahr from the Department of Environmental Quality, conducted a Comprehensive Performance Evaluation for the wastewater treatment system for the City of Glasgow in April. While this is an activity Doris and Bill have performed before in other communities, this one was unusual in that they had representatives from North Dakota and South Dakota as part of the evaluation team as well. This was a cooperative effort between these neighboring states to both provide training in system evaluations and to compare the programs in these three states. Thanks to Randolf Hilding of the South Dakota Department of Environment & Natural Resources and Craig Bartholomay of the North Dakota Department of Health.

PRETREATMENT PROGRAMS

Questions & Answers

Question: There's been talk in my city about setting up a pretreatment program. What does that mean?

Answer: A pretreatment program is designed to reduce the amount of pollutants discharged by businesses into municipal sewer systems and thereby protect wastewater treatment plants (also referred to as publicly owned treatment works or POTWs) and their receiving water from the discharged pollutants.

Pretreatment refers to pollution control requirements for non-domestic sources discharging wastewater to sewers that are connected to POTWs.

Pretreatment programs are a cooperative effort of federal, state, and local regulatory environmental enforcement agencies established to protect water quality. In Montana, the EPA-Montana Office administers pretreatment programs.

Question: What are the goals of a pretreatment program?

Answer: Pretreatment programs are designed to:

- Prevent non-domestic pollutants that could interfere with POTW operations from being discharged. Referred to as interference.
- Prevent the introduction of pollutants to the municipal sewer system that could pass through the POTW untreated to receiving water. Referred to as pass through.
- Improve the changes of reusing or recycling sludge that accumulates at the POTW. For example, non-contaminate sludge could be composted.
- Protect the health of POTW employees.

Question: Who may be required to have a pretreatment program?

Answer: In general, cities and towns are subject to EPA's pretreatment regulations (in smaller towns a particular business, instead of the whole town, may be required by EPA to take pretreatment measures). In Montana, there are seven cities with EPA-approved pretreatment programs: Billings, Great Falls, Missoula, Bozeman, Helena, Butte, and East Helena. Communities are required to have a program if:

- Their POTW has a flow of over five million gallons per day.
- They have non-domestic sources of pollution that have the potential for interference or pass through (see previous question).
- They have non-domestic sources that are subject to EPA's categorical pretreatment standards (limitations on pollutant discharges to POTWs promulgated by EPA in accordance with the Clean Water Act that apply to specific process wastewater of particular industrial categories, such as metal finishing and timber production).

Question: Who has authority to enforce pretreatment program requirements?

Answer: Ultimately, EPA has authority in Montana. However, once it has been determined that a pretreatment program is necessary, a particular community can pass a local ordinance granting the city or town authority to:

- Run a pretreatment program.
- Inspect and sample businesses (selected by the community because of the pollutants in their wastewater).
- Enforce the program.
- Develop local limits for pollutants (usually metals like arsenic, silver, and zinc) discharged to their POTW.
  -Target businesses types may be assigned an allowance (maximum amount of pollutants a business can discharge, expressed in pounds per day).
- Develop a sampling schedule for testing target business types' effluent.

Question: What can a business do to comply with their community's pretreatment program standards?

Answer: A business can do the following:

- The cheapest thing to do is to remember that POTWs were designed for domestic wastes, not industrial, so treat your POTW (and ultimately local taxpayers) with respect.
- Implement pollution prevention measures, such as using less hazardous products, recycling internally, and reducing the amount of wastewater discharged.
- If you have been assigned a pollutant limit allowance, work with your local government to develop a compliance schedule.
- Prevent certain wastewater sources from entering the municipal sewer system. For example, allow only bathroom sinks and toilets to go to the sewer, and create a "closed loop" recycling system for process wastewater.

For more information on pretreatment programs, contact Gwen Jacobs of the EPA-Montana Office at (406)441-1130(ext. 235) or your local POTW.

DUCKWEED FIGHTS ALGAE, LOWERS NUTRIENTS

The town of Laurel, Del., has won awards for the performance of its 0.5 mgd wastewater treatment facility, in part because of a floating plant system that lowers algae growth in its final lagoon. The treatment facility consists of preliminary treatment followed by three lagoons, intermittent sand filtration and chlorination for final disinfection. The first lagoon provides primary treatment, the second is for anaerobic treatment and the third is a facultative lagoon.

Before a recent upgrade, the facility normally had no problem meeting its discharge limits of 30 mg/L BOD and 30 mg/L TSS. But the abundance of algae growth in the last pond often caused clogging and filtration problems in the sand filter. In 1991, Laurel officials asked Lemna Inc. to help with the problem. The third pond was divided into two cells by a hydraulic baffle and in 1992, a Lemna system was installed on the 7.0 acres of cell two.

"It has helped our sand filters quite a bit," said Allen Atkins, supervisor of public works. "We can put a lot more water through them."

Lemna systems are based on the use of lemnaceae plants, also known as duckweed. The plants grow all over the world in a variety of climates. They are small in size, about 1/16 inch in diameter, but have a large appetite for the kind of nutrients found in municipal wastewater.

The duckweed plants have helped with nutrient removal, although there have been minor spikes when the lagoon effluent BOD and TSS were unacceptably high, Atkins said. Those spikes have occurred during the spring when the lagoons turned over, or at times when the staff stopped harvesting the duckweed plants either because of equipment problems or winter weather.

The Laurel facility's influent BOD and TSS average between 200 and 400 mg/L. Under normal operating conditions, effluent BOD levels can easily dip into the single digits. In November, lagoon effluent BOD averaged 6.5 mg/L and TSS averaged 5.4 mg/L, Atkins said.

The lemnaceae plants float freely on the water surface, with their roots reaching downward into the nutrient soup of a wastewater lagoon. They form a dense mat that prevents light from reaching the water, suppressing the algae growth. The mat also prevents the escape of odors by providing an oxygen-rich barrier between the water column and the atmosphere.

The Laurel system includes a floating barrier grid, hydraulic baffles and a corrosion resistant shoreline anchoring system. The floating grid reduces wind and wave action allowing the duckweed plants to achieve a full mat cover. The grid is constructed of high density polyethylene and is designed to withstand temperature and environmental extremes. The baffle system interconnects with the floating grid and provides a serpentine flow to maximize detention time under the plant mat.

Because the lemnaceae blanket is a living thing, dead plants must be harvested periodically to make room for the young. New shoots of the lemnaceae plant are more effective in nutrient removal than older plants, which are readily composted after harvesting. Harvesting frequency is dependent upon several variables including climate, treatment objectives, and nutrient load.

The Laurel staff harvests the plants with a pontoon boat driven by a paddle wheel, which pushes the plants to a pickup head that pumps them into a trailer. They are then trucked a short distance to a compost structure.

* * *

INNOVATIVE WATER TREATMENT TECHNOLOGIES

The Montana Water Center has received EPA funding for its Small Systems Drinking Water Assistance Program for next year. In July the Water Center selected several treatment technologies for testing. The following is a listing of the projects, principal investigators and their institutions:

Biological Oxidation for Iron and Manganese Removal
Dr. Anne Camper
Montana State University

Ceramic Membrane Microfiltration
Kishore Rajagopalan
Illinois State University

Evaluation of Ultraviolet (UV) Disinfection
Barbara Keller
Montana Tech

Sulfur-Modified Iron for Arsenic Removal
Dean Adams
University of Nevada - Reno

Membrane Treatment of High Plains Groundwater
Charles Moretti
University of North Dakota

Cost-Effectiveness of Telemetry for Small Systems
Tamin Younos
Virginia Tech

These projects utilize a technology developer working with independent university water researchers, who will test the technology to produce an unbiased report of the technology's effectiveness and application to small systems. These projects involve pilot or full-scale demonstrations at operating water plants.

The Water Center reviews and accepts proposals from many out-of state researchers since not all technologies develop in Montana, and it is important to find the best processes for Montana small systems, no matter where they are being studied. The ultimate goal remains that of fostering technologies that have promise for facilities in Montana.

The Water Center has a flier describing continuing demonstration projects and the interactive operator training project. Call the Center at (406)994-6690 for reports on completed projects. You may also view or download most of this information from the Montana water Center website: http://btc.montana.edu/watercenter.

* * *

WELCOME TO THE NEW FACES IN THE WATER POLLUTION CONTROL STATE REVOLVING FUND PROGRAM

(Gwen Pozega, Greg Wermers and Linda Hills)

New Regulations May Impact Your Public Sewage Disposal System

A recent revision to the ground water rules, ARM 17.30.1022 (1) (c) has limited the exclusion from ground water permitting that was formerly in effect for all public sewage systems reviewed and approved by the department under Title 75, chapter 6 and ARM 17.38.101. Under the new rules, public sewage disposal systems with a design capacity greater than 5000 gallons per day (and which could potentially impact ground water) are no longer excluded from obtaining a Montana ground water pollution control system (MGWPCS) permit from the department if the system is new (past the date of the new rule), or is undergoing a significant modification or expansion, or if the department determines that operation of the system has caused a violation of ground water quality standards. The department has determined that these facilities have the potential to significantly impact ground water quality and need monitoring to ensure that they are not causing ground water quality problems. The programs implementing the present department approval laws and rules do not involve sufficient inspection and monitoring to ensure that ground water quality is being protected. However, previously approved systems that do not fall into the new, modified, or violations of standards categories will still be excluded from having to obtain a MGWPCS permit.

The department is in the process of developing a general permit designed to protect ground water quality from these public disposal systems or private systems having similar quality wastewater. The primary emphasis of the permit is on nutrients, but the permit also addresses water quality standards for toxins and carcinogens, requires minimum treatment for BOD_5, and requires upgradient and downgradient ground water quality monitoring.

Public notice information summarizing the requirements of the proposed general discharge permit is scheduled to be mailed to potentially interested parties in late July or early August, 1998. As a receiver of this newsletter you are most likely on the list to received this information, so watch for it. If you are interested in receiving a copy of the proposed permit, call the Water Protection Bureau at 444-3080.

DEPARTMENT OF ENVIRONMENTAL QUALITY OPENS A REGIONAL OFFICE IN KALISPELL

On May 18, 1998 DEQ opened a regional office in Kalispell. The programs represented in the office are: the Public Water Supply Section with Greg Butts, the Leaking Underground Storage Tank Program with Bob Warren and the Open Cut Mining Program with Rod Samdahl.

The office is located at:
109 Cooperative Way, Suite 105
Kalispell, MT 59901.

The phone number is:
(406) 755-8985

The Fax number is:
(406) 755-8977.

Greg Butts covers Flathead, Lake, Lincoln, Sanders and Mineral counties for the Field Services Program of the Public Water Supply Section. If you have any questions about or need technical assistance with your Public Water Supply give him a call at the number listed above.

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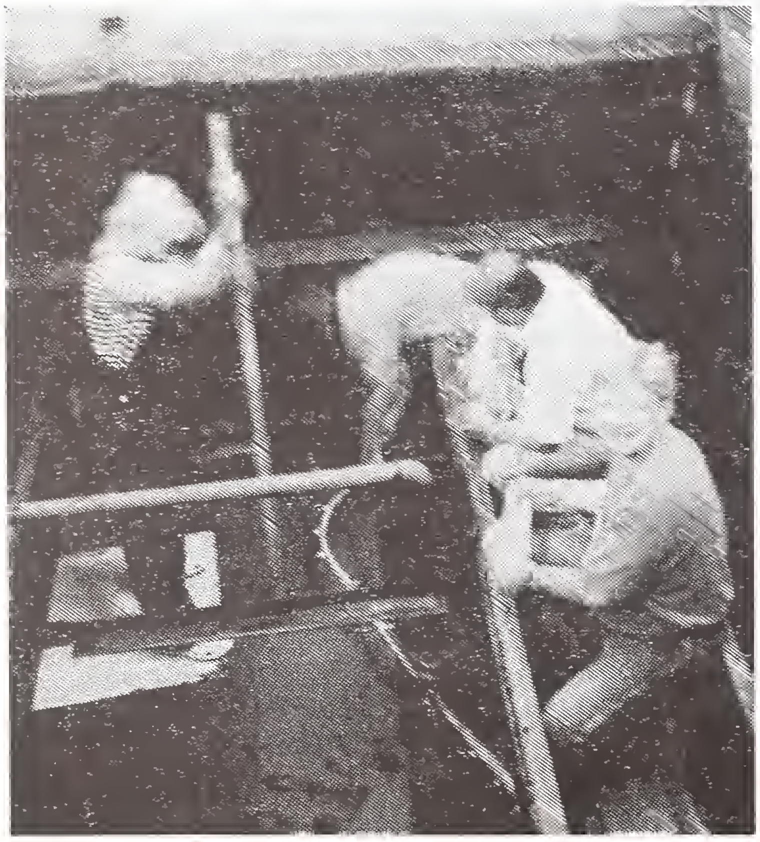
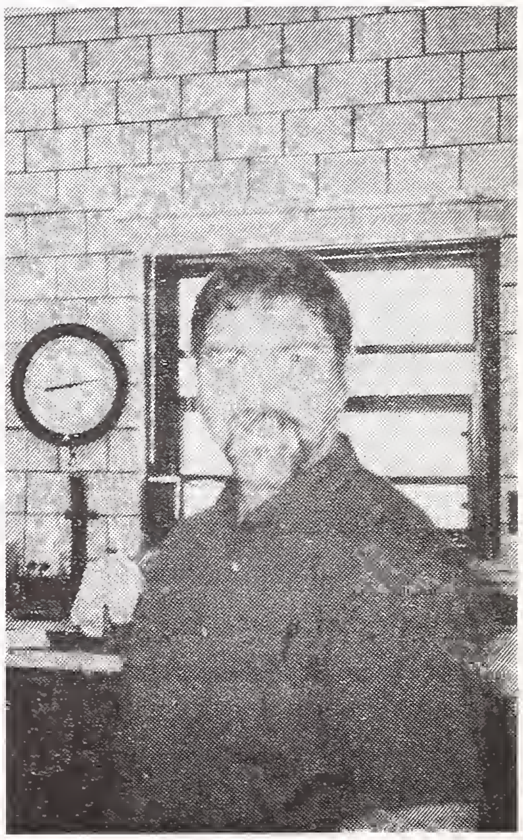
CONGRATULATIONS!!!!!

MONTANA RURAL WATER SYSTEMS SPECIALIST, RORY SCHMIDT, WAS AWARDED THE NATIONAL PROGRAM SPECIALIST OF THE YEAR BY NATIONAL RURAL WATER SYSTEMS AT THE ANNUAL CONFERENCE THIS SPRING. HE WAS NAMED THE BEST IN ALL 50 STATES AND PUERTO RICO. WE'VE ALWAYS KNOWN WHAT A SPECIAL PERSON YOU ARE. WAY TO GO, RORY!!!

JAMES E. KUNTZ, OPERATOR FOR US FILTER/EOS IN GREAT FALLS, RECENTLY COMPLETED THE CALIFORNIA STATE UNIVERSITY, SACRAMENTO, OPERATOR TRAINING COURSE, OPERATION OF WASTEWATER TREATMENT PLANTS, VOL. 1, WITH A SCORE OF 99%. RAMZI MAHMOUD, DIRECTOR OF THE TRAINING PROGRAM RECENTLY INFORMED DEQ CERTIFICATION OFFICER, SHIRLEY QUICK, OF JIM'S ACCOMPLISHMENT, WHO CONGRATULATES HIM ON BEHALF OF THE WATER AND WASTEWATER OPERATORS' ADVISORY COUNCIL.

SCENES FROM THE ENHANCED SURFACE WATER TREATMENT SEMINAR IN HAVRE IN JUNE





Ground Water ~~Disinfection~~ Rule-Update

by Joe Meek, DEQ

What is the Status of the Rule?

As specified in Section 1412(b)(8) of the Safe Drinking Water Act Amendments of 1996, EPA is working with interested stakeholders to develop a proposed rule to control microbial contamination in ground water-based drinking water supplies. One of the stakeholder groups providing input to EPA at the national level to ensure small systems are heard are the ***Small Entity Representatives*** which include the general manager from the Seeley Lake-Missoula County Water District. Discussions have centered on a range of requirements being considered by EPA, including source water monitoring, criteria to identify vulnerable source waters, sanitary surveys, distribution system operational measures, and adequate correction of defects (including disinfection) as necessary. The rule is to be proposed by March 1999 with a final rule in late 2000.

EPA continues to meet with various interested parties in the development this rule. Significant input has altered the course of the effort considerably. In fact, the rule was originally entitled *Ground Water Disinfection Rule* but the term disinfection has been dropped because the rule is not likely to impose disinfection except as a last resort in limited circumstances. It is now called the ground water rule or GDR.

Why is the GDR Needed?

Assurance that the drinking water is not fecally contaminated is the key issue for any drinking water system. Fecally contaminated waters are likely to contain enteric pathogens, which can cause gastrointestinal illness (diarrhea, vomiting, fatigue, cramps), hepatitis A, meningitis, typhoid fever, cholera, and a host of other illnesses. These illnesses can manifest themselves in the community at either the background level of illness (called the endemic level) or in outbreaks affecting several people within a short period of time. The pathogens of concern for the ground water rule are viruses and bacteria.

What Can I do to Prepare?

It is likely that the ground water rule will require an assessment of several factors relative to characteristics of the water source, source water protection practices, well construction, water treatment, distribution system, and monitoring history applying this yet to be written rule. It is also clear that a well written and very complete Source Water Protection Plan which fully characterizes your source water and water system may be a cornerstone for operators who will ultimately be responsible for implementing the ground water rule.

The EPA homepage lists GDR contacts as: Bruce Macler (415)744-1884 or Erin Flanagan (202) 260-5545. For information about source water protection in Montana please call Joe Meek at (406)444-4806 or Russell Levens at (406)444-0471.

DEQ MEETS WITH FEDERAL AND STATE LAND MANAGERS

On May 11th, DEQ held a meeting with federal and state land managers to discuss the TMDL process. The meeting was held from 10:00 a.m. to 4:00 p.m. in the Social and Rehabilitation Services (SRS) Auditorium at 111 Sanders.

Representatives from the Forest Service, Bureau of Land Management, DNRC Land Trust program, Natural Resources Conservation Service, Environmental Protection Agency, consulting industry, and Montana Fish, Wildlife & Parks attended the meeting.

Discussions included: (a) the TMDL process, (b) when land managers may wish to consider developing a TMDL, (c) conducting projects in water quality limited segments, (d) monitoring, (e) sharing of data, (f) beneficial use classification, and (g) DEQ's draft sufficient credible data criteria. The group agreed to meet again in the fall to follow up on various items which were suggested.

DEQ FILLS TMDL MONITORING POSITIONS

The DEQ Monitoring and Data Management Bureau has completed the selection process for three TMDL monitoring positions. Pat Newby of DEQ will be the Monitoring Coordinator for the Yellowstone Region, Carol Endicott will be the Lower Missouri Region Coordinator and Mike Suplee the Westslope Coordinator.

Pat Newby has been with DEQ/DES since September 1990, where he has worked in the LUST and State Superfund program. Pat has an A.S. from Long Beach City College, a B.S. in Aquatic Biology from Humboldt State University, and a M.S. in Environmental Engineering from Utah State. Pat's experience includes fish population and habitat evaluation and limnology in Idaho and Arkansas.

Carol Endicott comes to DEQ from Montana Fish, Wildlife & Parks where she is a fisheries biologist. Carol has a B.S. in Psychology from Kean Union College and a M.S. in Fish and Wildlife Management from MSU, Bozeman. Carol assisted DEQ with the first Nonpoint Source TMDL developed in Montana for Deep Creek. This TMDL has been featured nationally by EPA. Additional experience of Carol's includes invertebrate data evaluation, assessment of riparian condition and fish habitat assessment in Alaska and Montana.

Mike Suplee comes to DEQ from Texas A&M where he is finishing up his Ph.D. in Limnology. Mike also holds a M.S. in Wildlife and Fisheries Science from Texas A&M and a B.S. in Biological Conservation from California State University. Mike's graduate studies focused on nutrient fluxes from sediments to the water column in lakes and water chemistry effects on shrimp production in aquatic ponds. His work experience includes QA/QC in manufacturing, air and groundwater quality, fish-culture pond management in West Africa, and fisheries habitat experience in California.

ELECTRIC UTILITY DEREGULATION: MAY NOT MATERIALIZE SOON

The U.S. engineering community is watching the deregulation of California's electric utility industry, which began in January, with great interest. At last, affordable electric power will be available to all wastewater agencies-or will it?

Energy costs are high in California. Unfortunately, near-term energy savings for California's wastewater facilities likely will be must smaller than originally expected. Even if wastewater agencies have direct access to a variety of power providers, overall savings probably will be less than 10%, and probably closer to 5%. The reason is that energy costs consist of several components, including generation, transmission, distribution, and competitive transition charges (CTCs).

Direct access will reduce power-generation costs (which represent less than half of overall power costs), but it might not reduce transmission and distribution costs. And, considering that many energy regulators will allow electric utilities to impose temporary CCS to recoup their investments (possibly for 5 or more years after deregulation commences), energy costs could remain stubbornly high.

Overlooked Techniques

As wastewater facility managers wait for these CCS to expire, they can reduce labor, chemical, maintenance, and other operating costs relatively easily by practicing energy optimization. The benefits of conserving energy by using energy-efficient motors, high-efficiency lighting, fine-bubble diffusers, dissolved oxygen controls, and other capital-intensive techniques are well documented. But other techniques for optimizing energy use do not require large capital expenditures.

Benchmarking data, for example, helps plant managers set goals and targets by comparing their facilities' energy consumption against statistics for other facilities. The U.S. Environmental Protection Agency, Water Environment Federation, and Electrical Power Research Institute (EPRI) can help plant managers locate such information.

Successful energy-optimization programs are monitored and managed by an "energy champion". This person is appointed by management to promote energy awareness among staff members and monitor and control energy use and costs. Demand charges (charges for peak power use during a 15-or 30-minute period each month) can comprise 10% to 40% of a typical electric bill. Simple energy management systems can dramatically reduce demand charges without costly equipment retrofits. For example, a 17000-m3/d (4.5-mgd) wastewater treatment plant in Pennsylvania reduced demand and energy costs more than 30% by installing an energy management system to monitor demand and alert staff of demand on a real-time basis so they could keep demand below target values. This plant achieved success without other expensive energy conservation equipment retrofits, thanks to two energy champions who developed and implemented the strategy.

Other innovative energy conservation technologies and strategies include conditioning solids before anaerobic digestion to increase digester gas production and cogeneration potential and using high efficiency blowers with improved turn down ranges, high-efficiency mixers and aerators, fuel cells compatible with digester gas, alternatives to energy-guzzling recessed-impeller solids pumps, and two stage anaerobic digesters.

Resources Available
Many plant managers do not realize that resources are available to assist them in reducing energy costs. Many electric utilities offer technical assistance and incentives to reduce demand or conserve energy, and many states have energy commissions or state energy offices with staff who specialize in optimizing energy use at water and wastewater facilities. Independent organizations, such as EPRI's Community Environmental Center, also offer technical information and assistance for water and wastewater energy optimization.

Because energy costs can represent 20% to 40% of a facility's operating budget optimizing energy use obviously is important. It also can be surprisingly easy, inexpensive, and effective.

Comments

Please send in your submittals and/or comments for the next Clearwater publication by January 1, 1999 to the Department of Environmental Quality, P.O.Box 200901, Helena, Montana 59620-0901, attention: Bill Bahr, Editor. Thanks!

Department of Environmental Quality
Planning, Prevention & Assistance Division
P. O. Box 200901
Helena, MT 59620-0901

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